

ENGINEERING ORDER

Boeing North American, Inc.
Rocketdyne DivisionCAGE CODE
02602

R 416592

SH 1 OF 3

EFFECTIVITY MFG DET ORDERS ISSUED 8-1-97 & SUBSEQ.		CM ANAL <i>M. Miller</i>		MATL <i>Shawn Jackson 5/28/97</i>		PROJ ENG <i>5/29/97</i>		IMPLEMENTATION <input type="checkbox"/> MANDATORY <input checked="" type="checkbox"/> NON-MANDATORY <input type="checkbox"/> RECORD	
		ENGR TODD STUART		CHK <i>M. REALE 97-05-27</i>		MFG PLN <i>5-28-97</i>		MAY BE REWORKED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
		MGR <i>KEESE 5/29/97</i>		LOG					
		STRUC <i>E.C. Wong 5-28-97</i>		QE <i>Deauplay 5/28/97</i>					
ADDITIONAL DISTRIBUTION		SUBJECT DWG CHANGE		RESP UNIT 73		CHG IDENT NO		C/ICEI	
NAME		MAIL CODE		NO COPIES		POWERHEAD DUCTS, ASSY OF		SSME	
		EO		DOC		Powerhead/Ducts D/905-745		SSME (DEV)	
T. STUART		AB02		1 -		DOCUMENT/PART NUMBER		REV LTR	
B. YUKAWA		AC12		1 -		DWG YES NO		MCR 2345	
E. CARRASCO		AB02		1 -		TBC <input checked="" type="checkbox"/> <input type="checkbox"/>		NEXT ASSY NO	
J. CORBETT		AB02		1 -		QTY PER END ITEM			
E. WONG		AB02		1 -					

ON DWG R0018002 (SHEET 1, GENERAL NOTES)

(23) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

- .164 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED (A)
- .167 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED (A)
- .175 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 3$ AND ADJACENT AREAS NEAR $\triangle 3$ MARKED (A)
- .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 4$ AND ADJACENT AREAS NEAR $\triangle 4$ MARKED (A)
- .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 5$ AND ADJACENT AREAS NEAR $\triangle 5$ MARKED (A)
- .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 6$ AND ADJACENT AREAS NEAR $\triangle 6$ MARKED (A)

ACCOUNTING

MFG PIG ACTG: *72*
03984-96754-21510

(WAS) (23) STOCK WALL FOR THIS DIMENSION

(SHEET 2, ZONE 6F)

 .35 MIN FOR -7 (23) (A)

(WAS)

 .35 MIN FOR -7 (A)

REASONS AND REMARKS

REMOVE CONFUSING STOCK WALL CALLOUT AT WELD JOINTS AND REPLACE WITH DEFINITIVE AVG AND LOCAL MINIMUM WALL THICKNESS REQTS.

ATTACH EO COPIES TO DWG NO

R0018002 "NC" SH 1 & 2, R0018004 "NC", R0018011 "NC" SH 1 & 2, R0018012 "NC", R0018013 "NC"

APPLICABLE CHARGES

REL STAMP/DATE

OFFICIAL
05-29-97MM
RELEASE B.7.

ON DWG R0018004 (GENERAL NOTES)

(23) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.183 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED (A)

.164 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED (A)

(WAS) (23) STOCK WALL FOR THIS DIMENSION

ON DWG R0018011 (SHEET 1, GENERAL NOTES)

(5) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.080 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED (A)

.087 LOCAL MIN / .099 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED (A)

.085 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 3$ AND ADJACENT AREAS NEAR $\triangle 3$ MARKED (A)

.080 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 4$ AND ADJACENT AREAS NEAR $\triangle 4$ MARKED (A)

.085 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 5$ AND ADJACENT AREAS NEAR $\triangle 5$ MARKED (A)

.099 LOCAL MIN / .099 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 6$ AND ADJACENT AREAS NEAR $\triangle 6$ MARKED (A)

(WAS) (5) STOCK WALL FOR THIS DIMENSION

REL STAMP/DATE
OFFICIAL
05-29-97 MM
RELEASE

ON DWG R0018012 (GENERAL NOTES)

- (15) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.129 LOCAL MIN / .135 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\triangle A$

.125 LOCAL MIN / .135 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\triangle A$

(WAS) (15) STOCK WALL FOR THIS DIMENSION

ON DWG R0018013 (GENERAL NOTES)

- (15) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

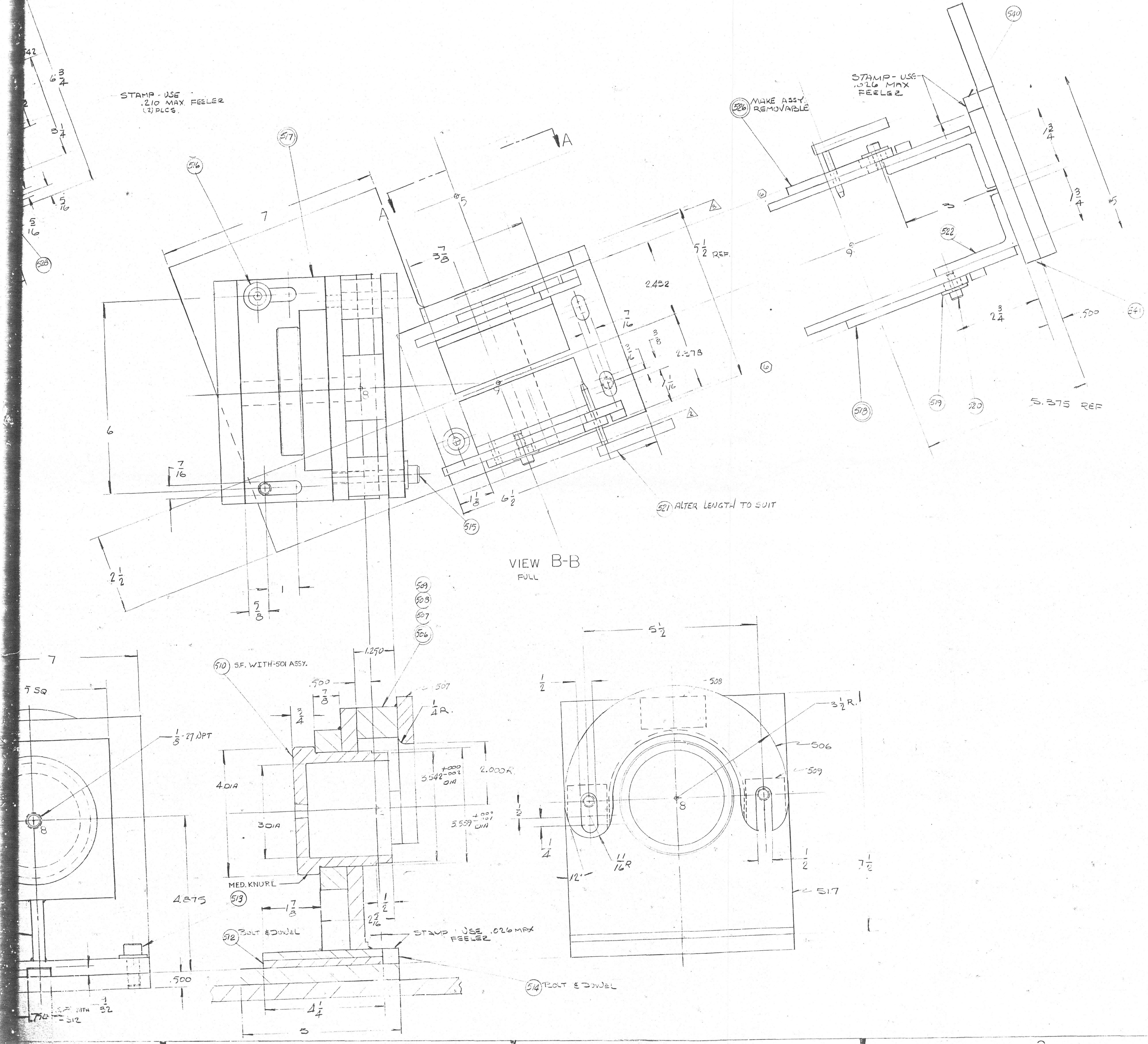
.115 LOCAL MIN / .124 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\triangle A$

.115 LOCAL MIN / .124 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\triangle A$

(WAS) (15) STOCK WALL THICKNESS FOR THIS DIMENSION.

REL STAMP/DATE
OFFICIAL
05-29-97 MM
RELEASE *B.1.*

REVISIONS						
NO.	DATE	BY	CHK	DATE	APPR	REASON
1	7-12-84	765				PRELIM RELEASE
2	7-17-85	765				DET-538 ALTER SIZE
3	7-17-85	765				200 POSIM RELEASE
4	7-17-85	765				ADDED DST-542
5	7-17-85	765				FINAL RELEASE



RELEASED DOCUMENT

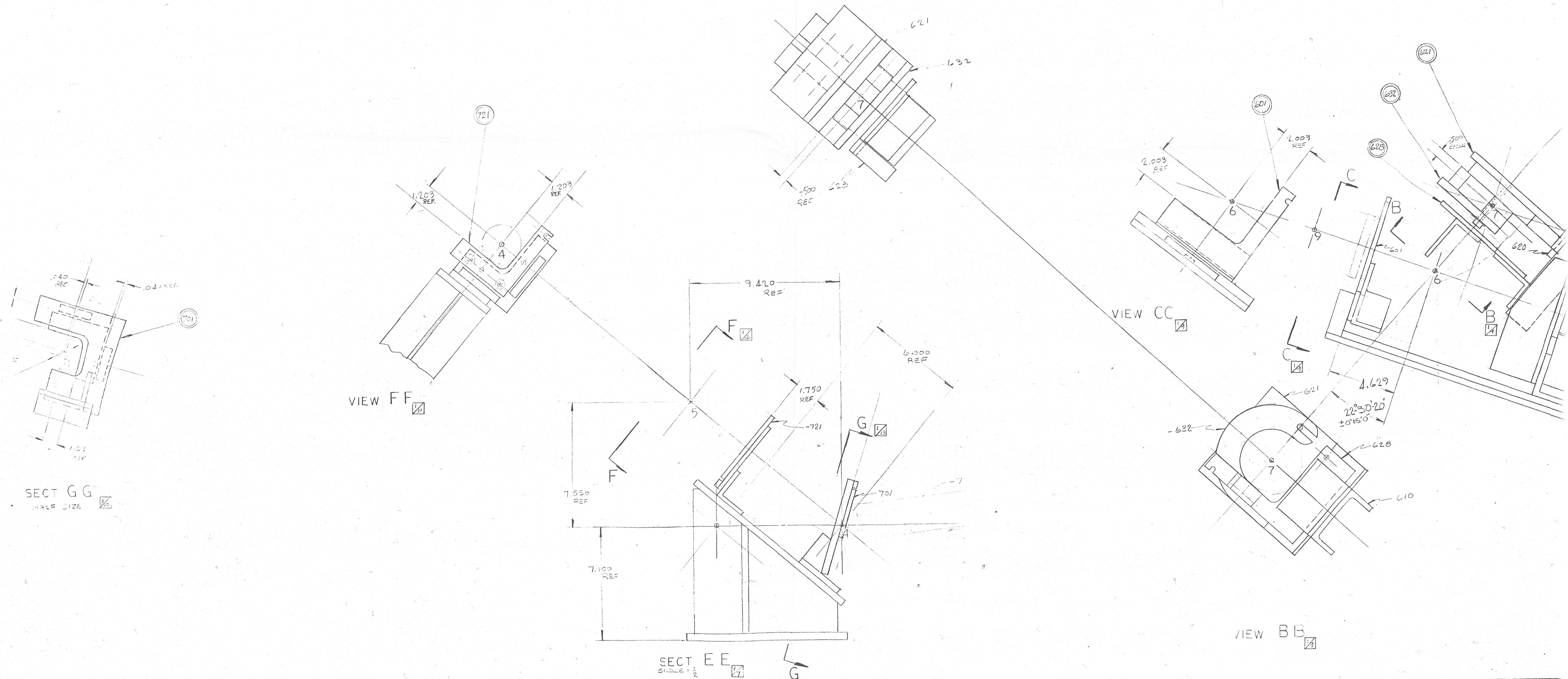
542	1	FLAT GROUND STOCK	1/4 x 1/4 x 6 3/4	5
543	1	HRS	1/2 x 1/2 x 1/2	2
544	1	HRS	1/2 x 1/2 x 1/2	2
545	1	HRS	3/8 x 1/2 x 3/4	10
546	1	HRS	5/8 x 9/16 x 1 1/2	10
547	1	HRS	3/8 x 9/16 x 1 1/2	10
548	1	HRS	3/8 x 1/2 x 1/2	10
549	1	HRS	5/8 x 9/16 x 1 1/2	10
550	1	HRS	3/8 x 1/2 x 1/2	7
551	1	HRS	3/8 x 1/2 x 1/2	7
552	1	HRS	3/8 x 1/2 x 1/2	8
553	1	HRS	1/2 x 1/2 x 1/2	10
554	1	WELD ASSY	3/8 x 1/2 x 1/2	10
555	1	HRS	1/2 x 1/2 x 1/2	10
556	1	FLUT GND STOCK	1/4 x 3/4 x 2 3/8	6
557	1	HRS	1/2 x 1/2 x 1/2	5
558	1	STL ANGLE (ALTER)	1/2 x 1/2 x 1/2	2
559	1	SUB ASSY	1/2 x 1/2 x 1/2	2
560	1	FL TAD STOCK	1/4 x 1/2 x 1/2	7
561	2	HRS	1/4 x 1/2 x 3/4	7
562	1	FL GND STOCK	1/2 x 1/2 x 1/2	7
563	1	STL ANGLE (ALTER)	1/2 x 1/2 x 1/2	2
564	4	L PIN (INTERCH.)	1/2 x 1/2 x 1/2	3
565	4	SOC HD SCR	1/2 x 1/2 x 1/2	2
566	4	WASHER	1/2 x 1/2 x 1/2	2
567	1	SUB ASSY	1/2 x 1/2 x 1/2	4
568	7	WASHER	1/2 x 1/2 x 1/2	5
569	2	SOC HD SCR	1/2 x 1/2 x 1/2	3
570	1	CRS	1/2 x 1/2 x 1/2	4
571	5	SOC HD SCR	1/2 x 1/2 x 1/2	4
572	1	KEY STOCK	1/4 x 1/2 x 1/2	4
573	1	HRS	1/2 x 1/2 x 1/2	1
574	1	HRS	1/2 x 1/2 x 1/2	1
575	2	HRS	1 x 1/2 x 1/2	4
576	1	HRS	1 x 1/2 x 1/2	4
577	1	HRS	1/2 x 1/2 x 1/2	4
578	1	WELD ASSY	1/2 x 1/2 x 1/2	4
579	1	HRS	1/2 x 1/2 x 1/2	4
580	1	HRS	1/2 x 1/2 x 1/2	4
581	1	HRS	1/2 x 1/2 x 1/2	4
582	1	WELD ASSY	1/2 x 1/2 x 1/2	4
583	1	HRS	1/2 x 1/2 x 1/2	4
584	1	HRS	1/2 x 1/2 x 1/2	4
585	1	HRS	1/2 x 1/2 x 1/2	4
586	1	WELD ASSY	1/2 x 1/2 x 1/2	4
587	1	HRS	1/2 x 1/2 x 1/2	4
588	1	HRS	1/2 x 1/2 x 1/2	4
589	1	HRS	1/2 x 1/2 x 1/2	4
590	1	WELD ASSY	1/2 x 1/2 x 1/2	4
591	1	HRS	1/2 x 1/2 x 1/2	4
592	1	HRS	1/2 x 1/2 x 1/2	4
593	1	HRS	1/2 x 1/2 x 1/2	4
594	1	HRS	1/2 x 1/2 x 1/2	4
595	1	HRS	1/2 x 1/2 x 1/2	4
596	1	HRS	1/2 x 1/2 x 1/2	4
597	1	HRS	1/2 x 1/2 x 1/2	4
598	1	HRS	1/2 x 1/2 x 1/2	4
599	1	HRS	1/2 x 1/2 x 1/2	4
600	1	HRS	1/2 x 1/2 x 1/2	4
601	1	HRS	1/2 x 1/2 x 1/2	4
602	1	HRS	1/2 x 1/2 x 1/2	4
603	1	HRS	1/2 x 1/2 x 1/2	4
604	1	HRS	1/2 x 1/2 x 1/2	4
605	1	HRS	1/2 x 1/2 x 1/2	4
606	1	HRS	1/2 x 1/2 x 1/2	4
607	1	HRS	1/2 x 1/2 x 1/2	4
608	1	HRS	1/2 x 1/2 x 1/2	4
609	1	HRS	1/2 x 1/2 x 1/2	4
610	1	HRS	1/2 x 1/2 x 1/2	4
611	1	HRS	1/2 x 1/2 x 1/2	4
612	1	HRS	1/2 x 1/2 x 1/2	4
613	1	HRS	1/2 x 1/2 x 1/2	4
614	1	HRS	1/2 x 1/2 x 1/2	4
615	1	HRS	1/2 x 1/2 x 1/2	4
616	1	HRS	1/2 x 1/2 x 1/2	4
617	1	HRS	1/2 x 1/2 x 1/2	4
618	1	HRS	1/2 x 1/2 x 1/2	4
619	1	HRS	1/2 x 1/2 x 1/2	4
620	1	HRS	1/2 x 1/2 x 1/2	4
621	1	HRS	1/2 x 1/2 x 1/2	4
622	1	HRS	1/2 x 1/2 x 1/2	4
623	1	HRS	1/2 x 1/2 x 1/2	4
624	1	HRS	1/2 x 1/2 x 1/2	4
625	1	HRS	1/2 x 1/2 x 1/2	4
626	1	HRS	1/2 x 1/2 x 1/2	4
627	1	HRS	1/2 x 1/2 x 1/2	4
628	1	HRS	1/2 x 1/2 x 1/2	4
629	1	HRS	1/2 x 1/2 x 1/2	4
630	1	HRS	1/2 x 1/2 x 1/2	4
631	1	HRS	1/2 x 1/2 x 1/2	4
632	1	HRS	1/2 x 1/2 x 1/2	4
633	1	HRS	1/2 x 1/2 x 1/2	4
634	1	HRS	1/2 x 1/2 x 1/2	4
635	1	HRS	1/2 x 1/2 x 1/2	4
636	1	HRS	1/2 x 1/2 x 1/2	4
637	1	HRS	1/2 x 1/2 x 1/2	4
638	1	HRS	1/2 x 1/2 x 1/2	4
639	1	HRS	1/2 x 1/2 x 1/2	4
640	1	HRS	1/2 x 1/2 x 1/2	4
641	1	HRS	1/2 x 1/2 x 1/2	4
642	1	HRS	1/2 x 1/2 x 1/2	4
643	1	HRS	1/2 x 1/2 x 1/2	4
644	1	HRS	1/2 x 1/2 x 1/2	4
645	1	HRS	1/2 x 1/2 x 1/2	4
646	1	HRS	1/2 x 1/2 x 1/2	4
647	1	HRS	1/2 x 1/2 x 1/2	4
648	1	HRS	1/2 x 1/2 x 1/2	4
649	1	HRS	1/2 x 1/2 x 1/2	4
650	1	HRS	1/2 x 1/2 x 1/2	4
651	1	HRS	1/2 x 1/2 x 1/2	4
652	1	HRS	1/2 x 1/2 x 1/2	4
653	1	HRS	1/2 x 1/2 x 1/2	4
654	1	HRS	1/2 x 1/2 x 1/2	4
655	1	HRS	1/2 x 1/2 x 1/2	4
656	1	HRS	1/2 x 1/2 x 1/2	4
657	1	HRS	1/2 x 1/2 x 1/2	4
658	1	HRS	1/2 x 1/2 x 1/2	4
659	1	HRS	1/2 x 1/2 x 1/2	4
660	1	HRS	1/2 x 1/2 x 1/2	4
661	1	HRS	1/2 x 1/2 x 1/2	4
662	1	HRS	1/2 x 1/2 x 1/2	4
663	1	HRS	1/2 x 1/2 x 1/2	4
664	1	HRS	1/2 x 1/2 x 1/2	4
665	1	HRS	1/2 x 1/2 x 1/2	4
666	1	HRS	1/2 x 1/2 x 1/2	4
667	1	HRS	1/2 x 1/2 x 1/2	4
668	1	HRS	1/2 x 1/2 x 1/2	4
669	1	HRS	1/2 x 1/2 x 1/2	4
670	1	HRS	1/2 x 1/2 x 1/2	4
671	1	HRS	1/2 x 1/2 x 1/2	4
672	1	HRS	1/2 x 1/2 x 1/2	4
673	1	HRS	1/2 x 1/2 x 1/2	4
674	1	HRS	1/2 x 1/2 x 1/2	4
675	1	HRS	1/2 x 1/2 x 1/2	4
676	1	HRS	1/2 x 1/2 x 1/2	4
677	1	HRS	1/2 x 1/2 x 1/2	4
678	1	HRS	1/2 x 1/2 x 1/2	4
679	1	HRS	1/2 x 1/2 x 1/2	4
680	1	HRS	1/2 x 1/2 x 1/2	4
681	1	HRS	1/2 x 1/2 x 1/2	4
682	1	HRS	1/2 x 1/2 x 1/2	4
683	1	HRS	1/2 x 1/2 x 1/2	4
684	1	HRS	1/2 x 1/2 x 1/2	4
685	1	HRS	1/2 x 1/2 x 1/2	4
686	1	HRS	1/2 x 1/2 x 1/2	4
687	1	HRS	1/2 x 1/2 x 1/2	4
688	1	HRS	1/2 x 1/2 x 1/2	4
689	1	HRS	1/2 x 1/2 x 1/2	4
690	1	HRS	1/2 x 1/2 x 1/2	4
691	1	HRS	1/2 x 1/2 x 1/2	4
692	1	HRS	1/2 x 1/2 x 1/2	4
693	1	HRS	1/2 x 1/2 x 1/2	4
694	1	HRS	1/2 x 1/2 x 1/2	4
695	1	HRS	1/2 x 1/2 x 1/2	4
696	1	HRS	1/2 x 1/2 x 1/2	4
697	1	HRS	1/2 x 1/2 x 1/2	4
698	1	HRS	1/2 x 1/2 x 1/2	4
699	1	HRS	1/2 x 1/2 x 1/2	4
700	1	HRS	1/2 x 1/2 x 1/2	4

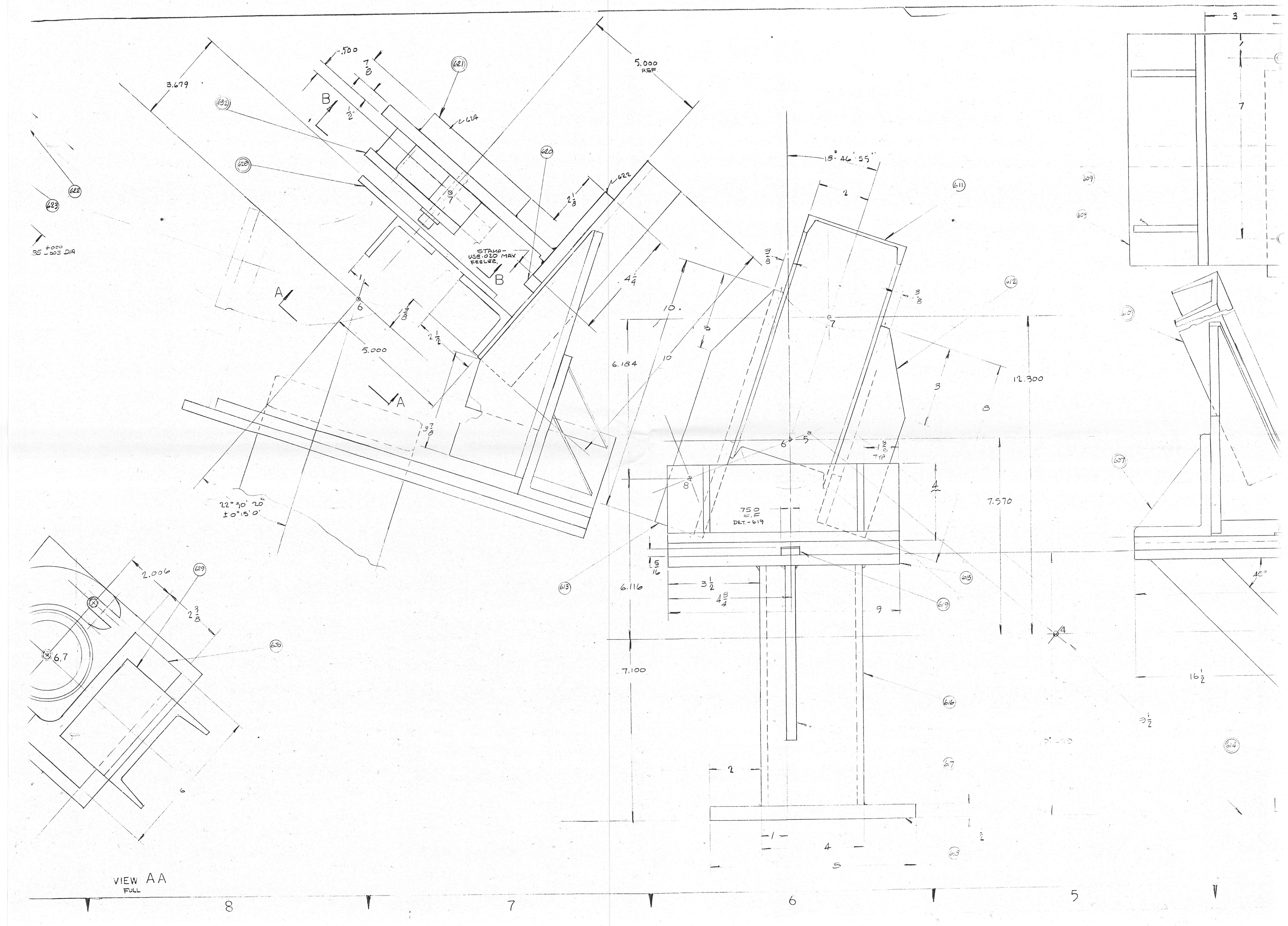
TYPED REQ MT - 2
T-5705545
E 020 NO-40 FEELER 2E
USING AND -514 STOP
E NET TO -517 HOUSING
FEELER BETWEEN -5
17 HOUSING WITH -517
0-514 STOP
ION OF -15 FLANGE, USE

[illegible]

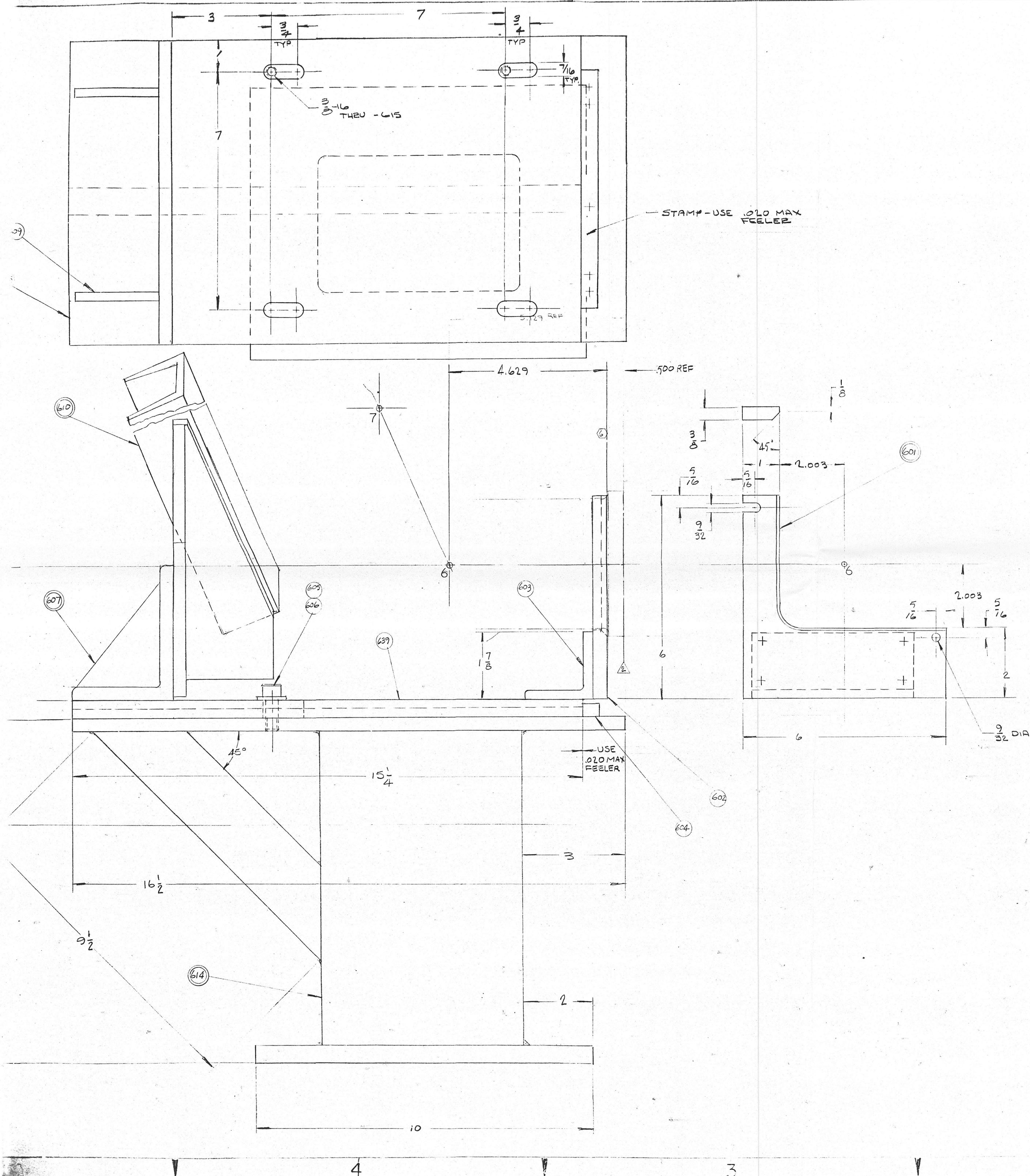
INSPECTION REQ'NT. #5
RDO 8002 T. 3795505
A GAP OF .060 MAX. BETWEEN END. PO. 1
LOCATORS. SLIDES AND NET STOPS. WITH
SLIDES AGAINST ENGR. PART OR .000
MAX. GAP BETWEEN LOCATOR SLIDES AND
EVERS. PART WITH SLIDES AGAINST
NET STOPS.

INSPECTION REQUIRED? []
 R001A002 [] [] [] [] [] [] [] T: 570 6569
 USE W. 3000: WELD HEAD FOR JOINT 1
 REMOVE ASSY. FROM DET. 526 AS
 REQ'D TO PROVIDE ACCESS FOR WELD
 HEAD TO WELD JOINT 3. REPLACE VALVE
 ASSY. DET. PRIOR TO INSPECTION.
 [] [] [] [] [] [] [] [] [] []





DATE	TIME	CHANGE	REASON	BY	CHK	DATE	APP
THIS TOOL DESIGNED TO 9003052			1/C CHG. DATED 7-13-84				
		PASLIM RELEASE	TO 470472	765		12-18-85	
		200 PASLIM RELEASE	67021782	764		1-17-85	
		-601 ADDED DIM. 2.003					
		ANGLE .22° 30' 20" WAS					
		23° 07' 48"					
		REVISED NOTE READ -					
		USE .020 MAX FEELER"					
		FINAL RELEASE	6704722	765		8-14-85	



RELEASED
DOCUMENT

639	1	HRS	5/8 x 7 x 15/2	7
639	2	WASHER	5/8 3/4 x 1 1/2	11
637	1	CRS	1/4 x 7/8 x 4	11
636	2	SCOT TO SCOT	3/8-16 x 1	11
635	1	HRS	1/4 x 1/8 x 2	11
634	1	HRS	5 x 7/16 x 2/3	11
633	2	HRS	1/4 x 1/4 x 1 3/8	11
632	1	WELD ASSY	5/0-633, 634, 635	5
631	1	STL ANGLE	2 x 2 x 1/4 x 1	7
630	1	PLAT GRD STL	3 x 7/4 x 1/4	3
629	1	STL ANGLE	2 x 2 1/2 x 1/4	5
628	1	WELD ASSY	5/0-629, 630, 631	5
627	2	SCOT TO SCR	3/8-16 x 2 1/4	7
626	2	WASHER	3/8 NOM ID	7
625	1	HRS	4 DIA x 3/2	7
624	1	HRS	1 x 5 x 5	7
623	1	HRS	5/8 x 7 x 3	7
622	1	HRS	5/8 x 4/2 x 7	7
621	1	WELD ASSY	5/0-622, 623, 624	7
620	1	CRS	1/2 x 1/2 x 4	7
619	1	CRS	1/4 x 7/8 x 7	7
618	1	HRS	5/8 x 8 x 10	5
617	1	HRS	3/8 x 2 x 10	5
616	1	RECT. TUBE	4 x 6 x 4-3/8	5
615	1	HRS	3/4 x 1/2 x 5/3	5
614	1	WELD ASSY	5/0-615 THRU-618	7
613	1	STL ANGLE	3 x 2 x 3/8 x 10	7
612	1	STL ANGLE	3 x 2 x 3/8 x 5	5
611	1	STL CHANNEL	3 x 1 1/4 x 7/8 x 10	5
610	1	WELD ASSY	5/0-610 THRU-613	5
609	1	HRS (MARKS 2)	1/2 x 3/4 x 1/4	5
608	1	STL ANGLE	1 x 3 x 3/8 x 7	5
607	1	WELDED ASSY	5/0-608, 609	5
606	4	WASHER	3/8 NOM ID	4
605	4	SCOT TO SCOT	5/8-16 x 1	4
604	1	CRS	1/2 x 1/2 x 7	3
603	1	STL ANGLE	1/2 x 2 x 1/4 x 7	7
602	1	PLAT GRD STL	3 x 3 x 1/4 x 6	3
601	1	SCOT ASSY	5/8-16 x 1	3
DET	NO REQD	DESCRIPTION	SIZE	SUPP QTY ZONE CODE SHIP WNT DATE/QT/INT



APPROVALS	GENERAL WORK (JIG)	Rockwell International Corporation
DATE: 11/10/82	DATE: 11/10/82	Rocketteer Division
	DATE: 11/10/82	Chico Park, California
	DATE: 11/10/82	
	IDENTITY: 1556	TOOL ENGINEERING
	DATE: 11/10/82	TORCH WE-B JIG
	DATE: 11/10/82	ROD18002-1754 DUCT
	DATE: 11/10/82	TO: 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 218

ENGINEERING ORDER

Boeing North American, Inc.
Rocketdyne DivisionCAGE CODE
02602

R 416592

SH 1 OF 3

EFFECTIVITY				CM ANAL <i>M. Miller</i>		MPL <i>Shawn Jackson 5/28/97</i>		PROJ ENG <i>REUSE 5/27/97</i>		IMPLEMENTATION <input type="checkbox"/> MANDATORY <input checked="" type="checkbox"/> NON-MANDATORY <input type="checkbox"/> RECORD	
MFG DET ORDERS ISSUED 8-1-97 + SUBSEQ.				ENGR <i>TODD STUART</i>		CHK <i>M. REALE 97-05-27</i>		MFG PLN <i>5-28-97</i>		LOG	
				MGR <i>REUSE 5/27/97</i>		QE <i>Deaullay 5/28/97</i>		SCHED <i>Reith 5/27/97</i>		MAY BE REWORKED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
ADDITIONAL DISTRIBUTION				SUBJECT DWG CHANGE		RESP UNIT 73		CHG IDENT NO		C/CEI	
NAME		MAIL CODE	NO COPIES EO DOC	POWERHEAD DUCTS, ASSY OF Powerhead/Ducts D/905-745		DWG YES NO TBC <input checked="" type="checkbox"/> <input type="checkbox"/>		MCR 2345		SSME SSME (DEV)	
T. STUART		AB02	1 -	DOCUMENT/PART NUMBER		REV LTR		QTY PER END ITEM		NEXT ASSY NO	
B. YUKAWA		AC12	1 -	ON DWG R0018002 (SHEET 1, GENERAL NOTES) (23) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS: .164 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 1 AND ADJACENT AREAS NEAR 1 MARKED (A) .167 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 2 AND ADJACENT AREAS NEAR 2 MARKED (A) .175 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 3 AND ADJACENT AREAS NEAR 3 MARKED (A) .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 4 AND ADJACENT AREAS NEAR 4 MARKED (A) .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 5 AND ADJACENT AREAS NEAR 5 MARKED (A) .127 LOCAL MIN / .138 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR 6 AND ADJACENT AREAS NEAR 6 MARKED (A)							
E. CARRASCO		AB02	1 -								
J. CORBETT		AB02	1 -								
E. WONG		AB02	1 -								
ACCOUNTING MFG P/G ACTG: <i>je</i> 03984-96754-21510				(WAS) (23) STOCK WALL FOR THIS DIMENSION (SHEET 2, ZONE 6F)  .35 MIN FOR -7 (23) (A) (WAS)  .35 MIN FOR -7 (A)							
REASONS AND REMARKS REMOVE CONFUSING STOCK WALL CALLOUT AT WELD JOINTS AND REPLACE WITH DEFINITIVE AVG AND LOCAL MINIMUM WALL THICKNESS REQTS.										REL STAMP/DATE OFFICIAL <i>05-29-97MM</i> RELEASE B.1.	
ATTACH EO COPIES TO DWG NO R0018002 "NC" SH 1 & 2, R0018004 "NC", R0018011 "NC" SH 1 & 2, R0018012 "NC", R0018013 "NC"										APPLICABLE CHARGES	

ON DWG R0018004 (GENERAL NOTES)

(23) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.183 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\hexagon A$

.164 LOCAL MIN / .193 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\hexagon A$

(WAS) (23) STOCK WALL FOR THIS DIMENSION

ON DWG R0018011 (SHEET 1, GENERAL NOTES)

(5) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.080 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\hexagon A$

.087 LOCAL MIN / .099 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\hexagon A$

.085 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 3$ AND ADJACENT AREAS NEAR $\triangle 3$ MARKED $\hexagon A$

.080 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 4$ AND ADJACENT AREAS NEAR $\triangle 4$ MARKED $\hexagon A$

.085 LOCAL MIN / .085 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 5$ AND ADJACENT AREAS NEAR $\triangle 5$ MARKED $\hexagon A$

.099 LOCAL MIN / .099 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 6$ AND ADJACENT AREAS NEAR $\triangle 6$ MARKED $\hexagon A$

(WAS) (5) STOCK WALL FOR THIS DIMENSION

REL STAMP/DATE
OFFICIAL
05-29-97/MH
RELEASE B.1

ON DWG R0018012 (GENERAL NOTES)

(15) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.129 LOCAL MIN / .135 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\hexagon A$

.125 LOCAL MIN / .135 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\hexagon A$

(WAS) (15) STOCK WALL FOR THIS DIMENSION

ON DWG R0018013 (GENERAL NOTES)

(15) THE LOCAL MINIMUM AND AVERAGE MINIMUM WALL THICKNESSES AFTER TUBE BENDING, WELDING, AND FINAL MACHINING SHALL BE AS FOLLOWS:

.115 LOCAL MIN / .124 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 1$ AND ADJACENT AREAS NEAR $\triangle 1$ MARKED $\hexagon A$

.115 LOCAL MIN / .124 AVG MIN (MEAS 4 PLACES MIN, EQ SP) FOR $\triangle 2$ AND ADJACENT AREAS NEAR $\triangle 2$ MARKED $\hexagon A$

(WAS) (15) STOCK WALL THICKNESS FOR THIS DIMENSION.

REL STAMP/DATE

OFFICIAL
05-29-97 MM
RELEASE

R 381056

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division 5-10-94CAGE CODE
02602

SH 1 OF 7

EFFECTIVITY				CM ANAL W. Janner		MAIL S. R. Kella		PROV. THER		IMPLEMENTATION MANDATORY <input checked="" type="checkbox"/> NON-MANDATORY <input type="checkbox"/> RECORD	
MFG DET				ENGR HOWARD F PHILLIPS		CHK Paul Pearl 9/19/94				MAY BE REWORKED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
EFFECTIVE ON OR BEFORE 6-15-94 SUBS				MGR [Signature]		MFG PL [Signature]		SCHL K. Ponciano 1/25/94			
ADDITIONAL DISTRIBUTION				SUBJECT DRAWING CHANGE				RSP UNIT 72		CIG IDENT NO	
NAME		MAIL CODE		NO COPIES		POWERHEAD ASSY				DWG YES NO TBC <input checked="" type="checkbox"/> <input type="checkbox"/>	
				EO DOC		SSME POWERHEAD TEAM D/736				MCR-1339R1 SSME	
D. PIERCE		AB02		1		DOCUMENT/PART NUMBER				REV LTR	
S. YOWS		AB02		1						QTY PER END ITEM	
M. GOICAU		AB02		1						NEXT ASSY NO	
K. PONCIANO		AB02		1		<p>② REF RDC 136517 & RDC 129647</p> <p>ON THE FOLLOWING DRAWINGS, ADD NOTE AS SHOWN: R0018021 SH1, R0018022 SH1, RS009014 SH2, R039051 SH1, R0018002 SH1, R0018004, R039034 SH1, R039047 SH1, RS009138 SH1 & SH5, RS009006, RS009022, R0018011 SH1, R0018012, R0018013</p>					
D. MILLER		AB02		1							
K. HABER		AB02		1							
S. INGHILTERRA		AB02		1							
D. JACKSON		AB02		1							
E. TISDALE		AB02		1							
Model Unit 20301 SUBS for MRP Implementation						<p>(ADD) X. FOLLOWING PROOF PRESSURE TESTS AND/OR DESIGNATED HEAT TREATMENTS, PENETRANT INSPECT PER RAO115-116 THOSE SPECIFIC WELD SURFACES ALONG WITH THE PENETRANT TYPES SPECIFIED IN RF0001-120.</p>					
PLANNING NOTE:											
MFG PLANNING CHG 03984-95998-55410											
<p>ATTACH EO COPIES ①: R0018001 "D" SH1 & SH5, R0018002 "NC" SH1, R0018004 "NC", R0018011 "NC" SH1, R0018012 "NC", R0018013 "NC", R0018020 "D" SH1, R0018021 "C" SH1, R0018022 "C" SH1, R0017425 "C" SH1, R0017435 "C" SH1, RS009006 "D", RS009122 "T" SH1, RS009022 "F", RS009126 "P" SH3 & SH6, RS009138 "D" SH1 & SH5, R039034 "NC" SH1</p>											
<p>REASONS AND REMARKS TO IDENTIFY THE SPECIFIC INTERNAL POWERHEAD WELDS REQUIRING PENETRANT INSPECTION AFTER PROOF PRESSURE TESTING ②</p>											
ATTACH EO COPIES TO DWG NO						APPLICABLE CHARGES					
RS009014 "H" SH2, R039047 "A" SH1, R039051 "A" SH1 & ① SEE ABOVE						NONE					
										REL STAMP/DATE 05-19-94 RELEASE	

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R381056

SH 2


ON DWG R0017435 SH 1, IN NOTES: (DELETE)

- B. PENETRANT INSPECT WELDS PER RAO115-116
SUBSEQUENT TO PROOF PRESSURE TEST AND
SUBSEQUENT TO HEAT TREATMENT.

(ADD)

- X. FOLLOWING PROOF PRESSURE TESTS AND/OR
DESIGNATED HEAT TREATMENTS, PENETRANT INSPECT PER
RAO115-116 THOSE SPECIFIC WELD SURFACES ALONG
WITH THE PENETRANT TYPES SPECIFIED IN
RFO001-120.

ON DWG R5009122 SH 1, IN NOTES: (DELETE)

24. PENETRANT INSPECT THE EXTERNAL OF WELD
JOINT  (SEE R5009126 ZONE 11A) PER RAO115-116
TYPE IIIb FOLLOWING THE POWERHEAD PROOF
TEST.

RECEIVED
05-19-94 21M
RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R 381056

SH 3

ON DWG R0018001 SH 1, IN NOTES:

(DELETE)

④① AFTER PROOF PRESSURE TEST PER ④①, PENETRANT INSPECT PER RAO115-116 WELD JOINT I.D. AND O.D TYPE IIA.

(ADD)

X. FOLLOWING PROOF PRESSURE TESTS AND/OR DESIGNATED HEAT TREATMENTS, PENETRANT INSPECT PER RAO115-116 THOSE SPECIFIC WELD SURFACES ALONG WITH THE PENETRANT TYPES SPECIFIED IN RFO001-120.

③⑥ PENETRANT INSPECT PER RAO115-116 WELD JOINT I.D. TYPE IIA AND WELD JOINT O.D. TYPE IVC.

(WAS)

③⑥ PENETRANT INSPECT PER RAO115-116 WELD JOINT I.D. TYPE IIA AND WELD JOINT O.D. TYPE IVC, REPEAT INSPECTION AFTER PRESSURE TEST PER ④①.

ON DWG R0018001 SH 5, ZN.G13:

② REF FOR R039054 — (WAS) ④① ② REF FOR R039054 —
ZN G11:

① REF FOR R039054 (WAS) ④① ① REF FOR R039054

REL STAMP DATE
OFFICIAL
05-11-94
RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R 381056

SH 4

ON DWG RS009126 SH 5, IN NOTES :
(DELETE)

- (23) PROOF PRESSURE TEST AND LEAK TEST SHALL BE PERFORMED PRIOR TO INSTALLING RS009389 BUT SUBSEQUENT TO (20). PENETRANT INSPECT PER RA0115-116 WELD (8) (50) (51) FOLLOWING THE FIRST CYCLE AND PENETRANT INSPECT THE SAME THREE WELDS PLUS AREAS PRESCRIBED BY RL00127 FOLLOWING THE FINAL CYCLE.
- (49) WELD JOINT (60) & RELATED MACHINING MAY BE OMITTED IF .100 PLUS .030 MINUS .000 OF THE NAIL HEAD IS REMOVED FROM ELECTRON BEAM WELD JOINT (8) ON THE FINISHED PART PRIOR TO (4) (HEAT TREAT) & (7) (PROOF PRESSURE, LEAK CHECK & PENETRANT INSPECTION).

(ADD)

- X. FOLLOWING PROOF PRESSURE TESTS AND/OR DESIGNATED HEAT TREATMENTS, PENETRANT INSPECT PER RA0115-116 THOSE SPECIFIC WELD SURFACES ALONG WITH THE PENETRANT TYPES SPECIFIED IN RF0001-120.

REL STAMP/DATE
OFFICIAL
05-19-94 2002
RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

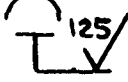










R 381056 | SH 5

ON DWG R5009126 SH 6

ZN 14A:

CLASS I    (WAS) CLASS I    



ZN 5A:

     CL II
(WAS)       CL II

ZN 8C:

.070-.090 FOR 360°  (WAS) .070-.090 FOR 360°  

PLANNING NOTE:

THE REMOVAL OF NOTE  FROM DWG R5009126 SH 5 AND THE REMOVAL OF  FROM ALL LOCATIONS ON SH 6 BRINGS DWG TO A STATE OF AGREEMENT WITH EXISTING PLANNING. ALL UNITS OF THE CURRENT CONFIGURATION HAVE BEEN PLANNED/FABRICATED TO THIS CHANGE.

REVISION
25-19-94 2/12/94
RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R 381056

SH 6

ON DWG R0018020 SH 1, IN NOTES: (DELETE)

34. AFTER COMPLETION OF PROOF PRESSURE TEST,
PENETRANT INSPECT ALL EXTERNAL WELDS PER
RA0115-116. THE FUEL PUMP MOUNTING SURFACE
IS EXEMPTED.

(ADD)

X. FOLLOWING PROOF PRESSURE TESTS AND/OR DESIGNATED
HEAT TREATMENTS, PENETRANT INSPECT PER RA0115-116
THOSE SPECIFIC WELD SURFACES ALONG WITH THE
PENETRANT TYPES SPECIFIED IN RFO001-120.

AUTHORIZATION IS GIVEN TO RELEASE THIS EO WHICH EXCEEDS THE
NUMBER OF ATTACHING EO'S ALLOWED BY PROCEDURE



THIS DRAWING IS SCHEDULED FOR RELEASE TO INCORPORATE

OUTSTANDING LO'S BY R0018001 10/1/94 R5009122
R0018020 10/1/94 9/30/94

S.A. Jensen 5/5/94

RELEASE DATE
25-19-94 2110
RELEASE 2

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R 381056

SH 7

ON DWG R0017425 SH1 IN NOTES; (DELETE)

7. PENETRANT INSPECT WELDS PER RAO115-116 AFTER PROOF TEST.

(ADD)

- X, FOLLOWING PROOF PRESSURE TESTS AND/OR DESIGNATED HEAT TREATMENTS, PENETRANT INSPECT PER RAO115-116 THOSE SPECIFIC WELD SURFACES ALONG WITH THE PENETRANT TYPES SPECIFIED IN RFO001-120,

- ⑫ PENETRANT INSPECT ROOT SIDE OF WELD PER RAO115-116 BEFORE PROOF PRESSURE TEST.

(WAS)

- ⑫ PENETRANT INSPECT ROOT SIDE OF WELD PER RAO115-116 BEFORE AND AFTER PROOF PRESSURE TEST.

X DENOTES NEXT AVAILABLE NUMBER

REVISION DATE
05-19-94 NIA
RELEASE R3

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division 10-22-93CAGE CODE
02602

R 383815

SH 1 OF 2

EFFECTIVITY MFG DET ORDERS ISSUED AFTER 1-1-94				CM ANAL <i>W. Hammer</i>	MAIL <i>B.D. Bots</i>	PROJ ENG <i>[Signature]</i>	IMPLEMENTATION <input type="checkbox"/> MANDATORY <input checked="" type="checkbox"/> NON-MANDATORY <input type="checkbox"/> RECORD MAY BE REWORKED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO												
				ENGR <i>D. PRICE</i>	CHK <i>Th. [Signature]</i> 93-10-12														
				MGR <i>[Signature]</i>	D.W. <i>[Signature]</i>	Q.E. <i>[Signature]</i> 10-19-93													
				THUC <i>[Signature]</i>	MFG. PLAN <i>T.L. White</i>	SOILED <i>[Signature]</i>													
ADDITIONAL DISTRIBUTION				SUBJECT DRAWING CHANGE		RESP UNIT 74		CHG IDENT NO		C/C/EI									
NAME	MAIL CODE	NO COPIES		DUCT TEAM D/766		DWG YES NO TBC <input checked="" type="checkbox"/> <input type="checkbox"/>		ECP-1177R2		SSME SSME (DEV)									
		EO	DOC																
D. PRICE	AB32	2		DOCUMENT/PART NUMBER		REV LTR	QTY PER END ITEM	NEXT ASSY NO											
D. MOYNIHAN	AB32	1		<div style="text-align: center;"><p>ON DRAWING ROO1B002 SH1 ZONE 23H</p><p>(IS)</p><table border="1"><tr><td>-7</td><td>8.00</td></tr><tr><td>-3</td><td>7.00</td></tr></table><p>(WAS)</p><table border="1"><tr><td>-7</td><td>7.45</td></tr><tr><td>-3</td><td>6.00</td></tr></table></div>								-7	8.00	-3	7.00	-7	7.45	-3	6.00
-7	8.00																		
-3	7.00																		
-7	7.45																		
-3	6.00																		
W. AGNEW	AB32	1																	
M. YUEN	AB32	1																	
T. WHITE	AD23	1																	
REASONS AND REMARKS INCREASED MAXIMUM WEIGHT REQUIREMENTS OF PHASE II+ DUCT DETAILS				REL STAMP/DATE OFFICIAL 10-25-93 RELEASE															
												ATTACH EO COPIES TO DWG. NO. ROO1B002 SH1 N/C, ROO1B012 N/C				APPLICABLE CHANGES NONE			

NO ACCOUNTING
REQUIRED.
PL

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
FSCM 02602

R 383815

SH 2

ON DRAWING R0018012
NOTES

(IS) (5) 6.00 LBS. MAXIMUM TUBE DETAIL WEIGHT
CALCULATED . . .

(WAS) (5) 4.95 LBS. MAXIMUM TUBE DETAIL WEIGHT
CALCULATED . . .

REL STAMP/DATE
OFFICIAL
10-25-93 ma
RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division 9-21-92CAGE CODE
02602

R 379123

SH 1 OF 2

EFFECTIVITY				CM ANAL		MAIL		PROJ		IMPLEMENTATION	
MFG DET ORDERS 20400 ORDER 12-15-92				ENGRH		CHK		9/18/92		<input type="checkbox"/> MANDATORY	
				MGH		Wk		9-11-92		<input checked="" type="checkbox"/> NON-MANDATORY	
				STRUCT		PLANING		9-11-92		<input type="checkbox"/> RECORD	
SUBJECT				9/11/92		9-11-92		9-11-92		MAY BE REWORKED	
ADDITIONAL DISTRIBUTION				SUBJECT		RES		CIG IDENT NO		CICLI	
NAME				DRAWING CHANGE		74		MCR-0691 RI		SSME	
MAIL CODE				DUCT PRODUCT TEAM D/766		DWG YES NO					
NO COPIES				DOCUMENT/PART NUMBER		TBC					
EO				REV		END ITEM		NLXI ASSY NO			
DOC				REV		END ITEM		NLXI ASSY NO			
J. HIGAREDA AB32				1							
R. URQUIDI AB32				1							
LEO LEE AB32				1							
E. MINEKIME AB32				1							
<p>①</p> <p>ROO18004 "NC"</p> <p>ROO18003 "NC"</p> <p>ROO18002 SH1 "NC"</p> <p>ROO18011 SH1 "NC"</p> <p>ROO18012 "NC"</p> <p>ROO18013 "NC"</p> <p>RS007012 SH1 & 3 REV "J"</p> <p>RS007022 SH1 & 2 REV "D"</p> <p>ROO18041 SH1 "NC"</p> <p>RS008805 SH1 & 3 REV "G"</p> <p>RS007276 REV "C"</p>				<p>(REF EOR 351089 DTD 10-14-88)</p> <p>REVISE THE LISTED DRAWINGS AS FOLLOWS: (DELETE) NOTES</p> <p>ON RS007022 SH1 NOTE 23 ;</p> <p>RS007012 SH3 NOTE 23 &</p> <p>ROO18012 (IN NOTES), NOTE 10:</p> <p>(WAS) MAGNETIC PARTICLE INSPECT DETAILS PER</p> <p>RA0115-115 PRIOR TO WELDING.</p> <p>ON RS007276 (IN NOTES), NOTE 6 ; RS007022 SH2, NOTE 5 ;</p> <p>RS008805 SH3 NOTE 7 & SH1 NOTE 7 ;</p> <p>ROO18003 (IN NOTES), NOTE 4 :</p> <p>(WAS) MAGNETIC PARTICLE INSPECT PER RA0115-115</p>							
REASONS AND REMARKS				REMOVE MAGNETIC PARTICLE INSPECTION REQ							
ATTACH EO COPIES TO DWG NO				APPLICABLE CHARGES				NONE			
①								RELEASE			

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division
CAGE CODE 02602

R 379123

SH 2

DELETE NOTES AS FOLLOWS:

ON RS007012 SH1 NOTE 27 ;

RO018041 SH1 NOTE 32 ;

RO018013 (IN NOTES), NOTE 6 ;

RO018011 SH1 NOTE 16 ;

RO018002 SH1 NOTE 18 &

RO018004 (IN NOTES), NOTE 7:

(WAS) MAGNETIC PARTICLE INSPECT DETAILS PER RA0115-115.

REL STAMP/DATE
OFFICIAL
2-2-92
RELEASE RBF

ENGINEERING ORDER

Rockwell International Corporation
Rockaldyne Division

FSCM
02602

B/P

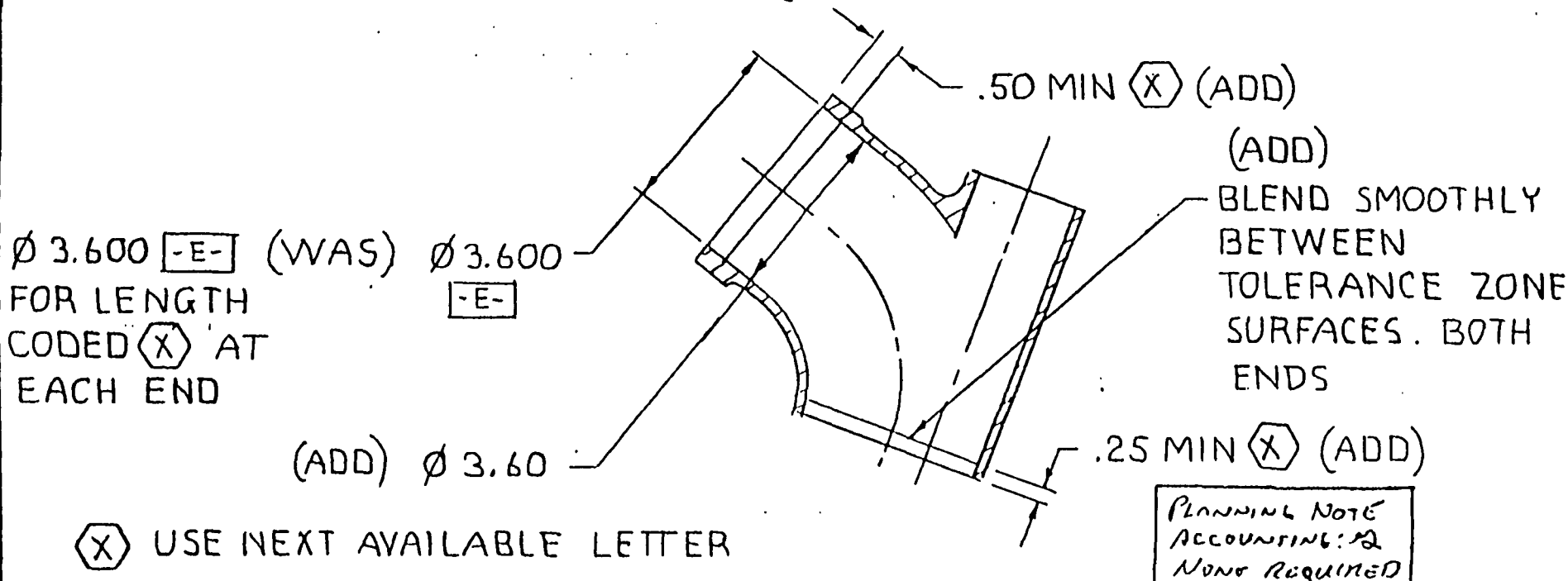
R 333436

SH 1 OF 1

EFFECTIVITY ORDERS ISSUED 2-14-86 AND SUBQ.	CM ANAL	MAIL	PROJ ENGR	PARTS MADE OK TO USE <input checked="" type="checkbox"/> MAY BE REWORKED YES <input type="checkbox"/> NO <input type="checkbox"/>
	ENGR	CHK		
	MDR			
	BTRUCT			
	S. LUKENS 1-14-86	R. L. Hellick 2-1-86	R. Wilson	
		R. T. O.	MFG SCHED	

ADDITIONAL DISTRIBUTION				SUBJECT		ENGR UNIT		CHG IDENT NO		CI/CEI	
NAME	MAIL CODE	NO. COPIES		DRAWING CHANGE		54		PECR10341 R2		SSME (DEV)	
		EO	DOC	ENG. SYST. DEVELOPMENT DES.		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>					
AL SUP	AB18	1	—	DOCUMENT/PART NUMBER		CHG LTR		QTY PER END ITEM		NEXT ASSY NO.	
BOARDMAN	AC60	1	—								
WILSON	BA40	1	—								
MILLARD	AA31	1	—								

ON DWG R0018002
IN ZONE 22C SH1 (SECTION F-F)



REASONS AND REMARKS		SCHED NOTE		REL STAMP/DATE	
PRODUCTIBILITY OF PART; TOLERANCES TOO TIGHT				OFFICIAL	
ATCH EO COPIES TO DWG NO:		APPLICABLE CHARGES		RELEASE	
R0018002 'NC' SH1		NONE			

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division 11-5-85FSCM
02602

B/P

R 331224

SH 1 OF 1

EFFECTIVITY NOW SHOP PRACTICE				CM ANAL		MATL		PROJ ENGR		<div>PARTS MADE</div> <div>OK TO USE <input type="checkbox"/></div> <div>MAY BE REWORKED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/></div>						
				ENGR J. FAIRBANKS		CHK J. H. Aylem		11-10-85								
				MGR J. H. Aylem		11/9/85		R. Wilson								
				STRUCT John Egan		R.T. Allen		11-18-85								
ADDITIONAL DISTRIBUTION				SUBJECT DRAWING CHANGE				ENGR UNIT 54		CHG IDENT NO		CI/CEI				
NAME		MAIL CODE	NO. COPIES		ENG. SYS. DEVELOPMENT DESIGN				DWG TBC		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		NONE		SSME (DEV)	
		EO	DOC		DOCUMENT/PART NUMBER				CHG LTR		QTY PER END ITEM		NEXT ASSY NO.			
FAIRBANKS		AC60	2													
ALSUP		AB18	1													
WILSON		BA40	1													
MILLARD		AA31	1													
BLUME		AB50	1													
CLARK		AB50	1													
<p>ON DRAWINGS R0018002 SH 1, R0018003, R0018004, R0018011 SH 1, R0018012, R0018013, R0018041 SH 1, R0018046</p> <p>ADD THE FOLLOWING NOTE:</p> <p>X. STANDARD REPAIR PERMITTED PER RF0001-039</p> <p>X. USE NEXT AVAILABLE NUMBER</p> <p>ATTACH EO COPIES TO DWG. NO: ①</p> <p>R0018002 'NC' SH 1, R0018003 'NC', R0018004 'NC', R0018011 'NC' SH 1, R0018012 'NC', R0018013 'NC', R0018041 'NC' SH 1, R0018046 'A'</p>																
PLANNING NOTE ACCOUNTING: 12 None Required																
REASONS AND REMARKS TO ADD STANDARD REPAIR SPEC TO PHASE II+ DRAWINGS. REF RDC 114072										SCHD NOTE		REL STAMP/DATE				
ATCH EO COPIES TO DWG NO: SEE ABOVE ①										APPLICABLE CHARGES 95311		OFFICIAL 11-20-85 RELEASE				

ENGINEERING ORDER

Rockwell International Corporation
Rockaldyne Division 1/21/85FSCM
02602

R 325255

SH 1 OF 1

EFFECTIVITY

RECORD CHG.

CM ANAK

ENGR

MOR

STRUCT

MATL

CHK

PROVION

PARTS MADE

OK TO USE

MAY BE

REWORKED

YES NO
☐ ☐

ADDITIONAL DISTRIBUTION

SUBJECT DRAWING CHG

ENGR

UNIT

CHG IDENT NO

CUCB

NAME	MAIL CODE	NO. COPIES	
		BO	DGC
C. ALSUP	AB11	1	
E. SYP	AC60	1	
R. BOARDMAN	AC60	1	
D. MILLARD	BA64	1	
B. RUMBLE	BA45	1	
R. WILSON	BA45	1	

ENGINE SYSTEMS DESIGN

DWC

TBC

YES NO

☒ ☐

PECR10341 R3

SSME (DEV)

CHG

LTR

QTY PER

END ITEM

NEXT ASSY NO.

ON DWGS R0018002, R0018003 & R0018011

ADD NOTE: ☒ ALLOWABLE ALTERNATE MATERIAL IS INCOLOY 903 BAR PER RBO170-186

ON DWG R0018002 IN LIST OF MATERIALS

-5 MAKE FROM R0018047-5 ☒ (WAS) -5 MAKE FROM R0018047-5

ON DWG R0018003 IN LIST OF MATERIALS

-3 MAKE FROM R0018047-3 ☒ (WAS) -3 MAKE FROM R0018047-3

ON DWG R0018011 IN LIST OF MATERIALS

-15 MAKE FROM R0018047-7 ☒ (WAS) -15 MAKE FROM R0018047-7

MASTER B/P FILES

X DENOTES NEXT AVAILABLE NO.

REASONS AND REMARKS

ADD ALLOWABLE ALTERNATE TO MAKE DUCT ELBOWS FROM 903 BAR IN LIEU OF 903 FORGINGS.

ATCH 50 COPIES TO DWG NO:

R0018002 "NC" SH1, R0018003 "NC", R0018011 "NC" SH1

SCHED NOTE

APPLICABLE CHARGES

95311

REL STAMP/DATE

OFFICIAL

1-31-85

RELEASE

ENGINEERING ORDER

Rockwell International Corporation
Rocketdyne Division 11/30/84

FSCM
02602

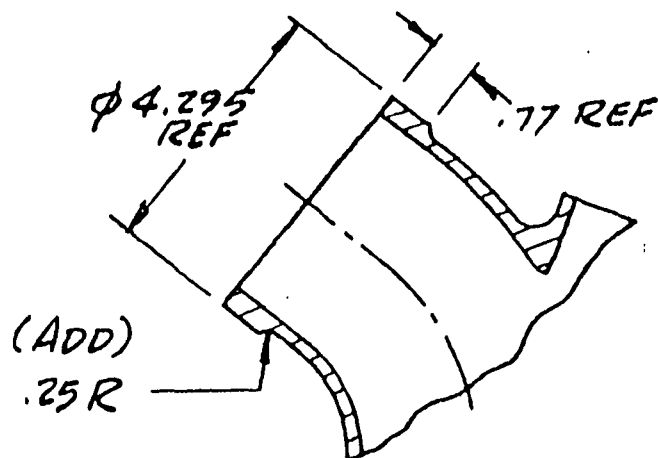
B/P

R 324673

SH 1 OF 1

EFFECTIVITY RECORD CHG				CM ANAL <i>[Signature]</i>	MATL <i>[Signature]</i>	PROJ ENGR <i>[Signature]</i>	PARTS MADE	
				ENGR S. MORISHITA	CHG <i>[Signature]</i>	<i>[Signature]</i>	OK TO USE <input type="checkbox"/>	
				MGR <i>[Signature]</i>			MAY BE REWORKED <input type="checkbox"/>	
				STRUCT <i>[Signature]</i>		MFG SCHED 2-6-84 <i>[Signature]</i>	YES NO <input type="checkbox"/> <input type="checkbox"/>	
ADDITIONAL DISTRIBUTION				SUBJECT DRAWING CHANGE		ENGR UNIT 584/156		CHG IDENT NO
NAME		MAIL CODE	NO. COPIES	P/B FUEL SUPPLY DUCT		DWG TBC YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		CI/CEI
		EO	DOC	ENG SYS DEV		PECR10341R2		SSME (DEV)
Q. ALSUP		AB18	1	DOCUMENT/PART NUMBER		NEXT ASSY NO.		
K. PHILLIPS		BA64	1	CHG LTR				
R. BOARDMAN		AC60	1	DTP PER				
S. MORISHITA		AC60	1	END ITEM				

ON DWG R001800Z
IN ZONE Z2C, SH 1 (SECT F-F)



REASON AND REMARKS **ADDING MISSING FILLET RADIUS REQ FOR -5 ELBOW.**

ATCH EO COPIES TO DWG NO: **"NA" 541**

SCHED NOTE

APPLICABLE CHARGES

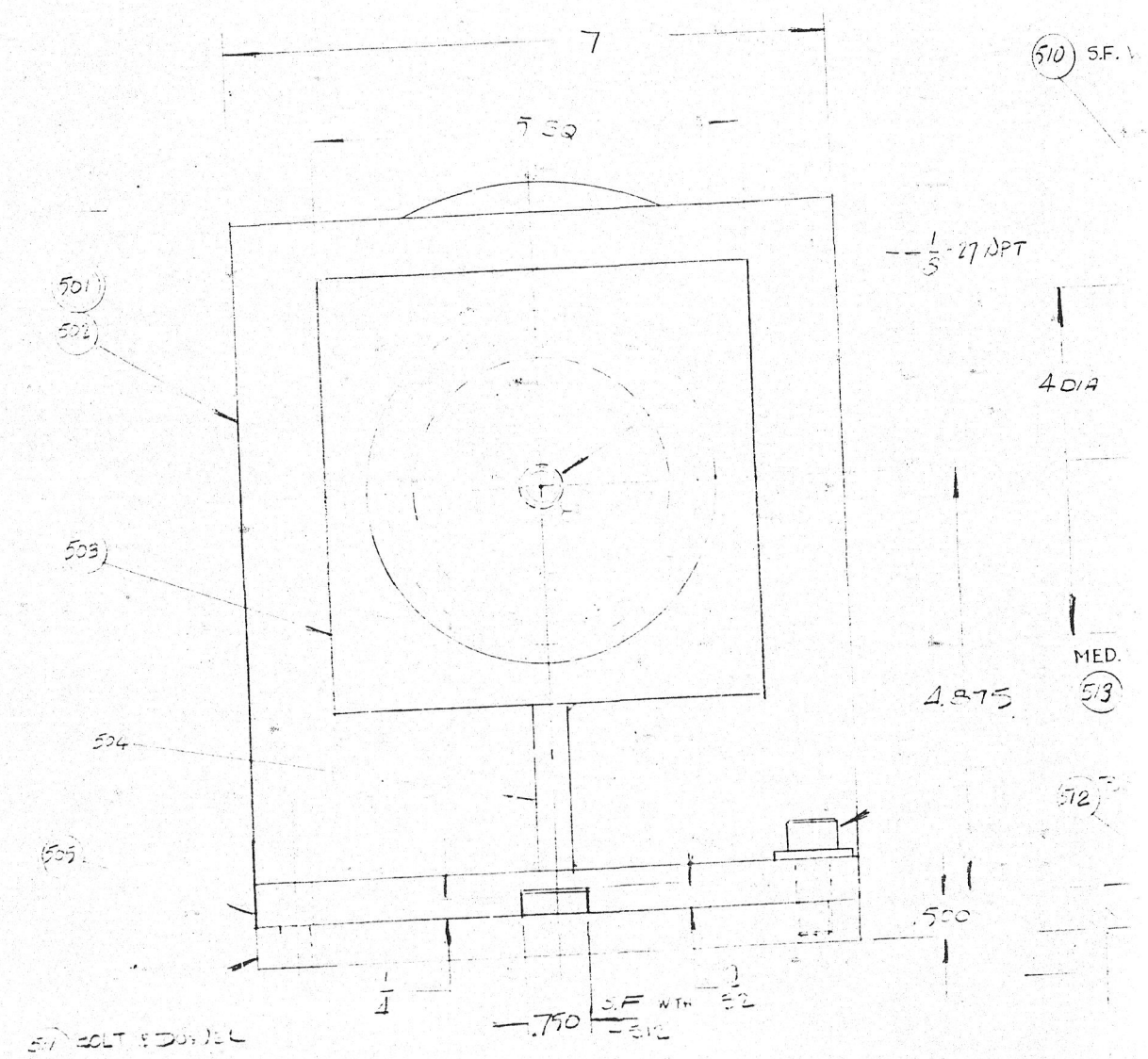
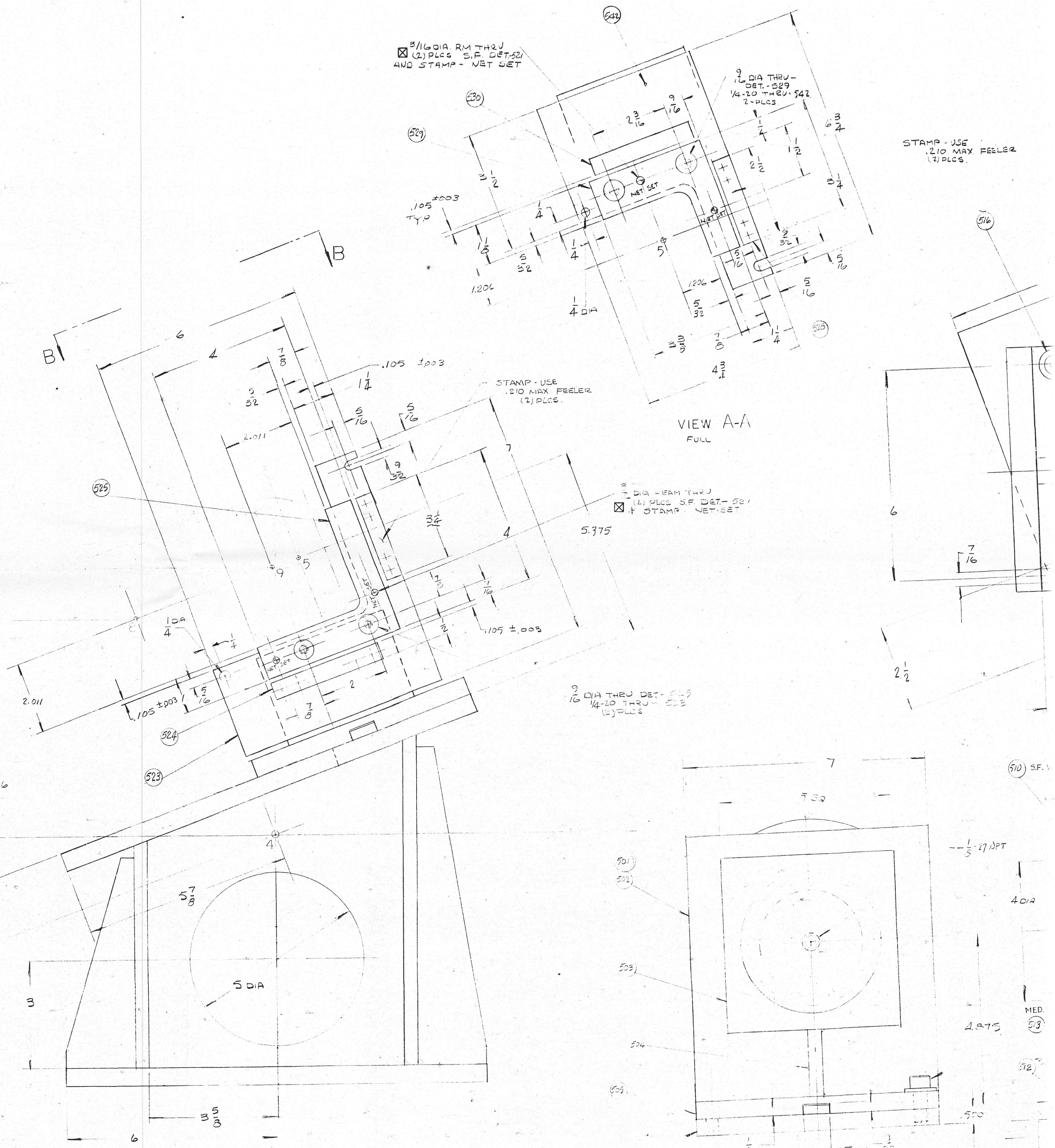
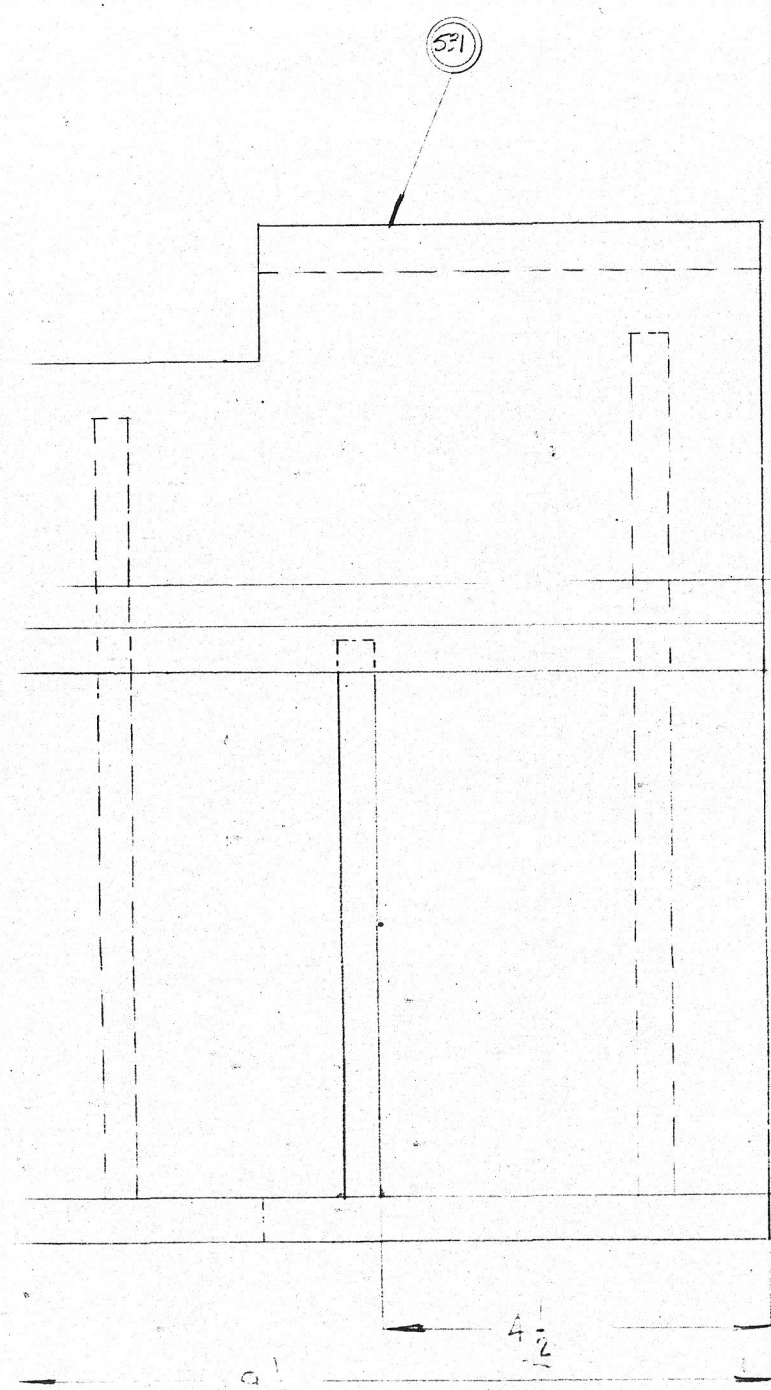
95311

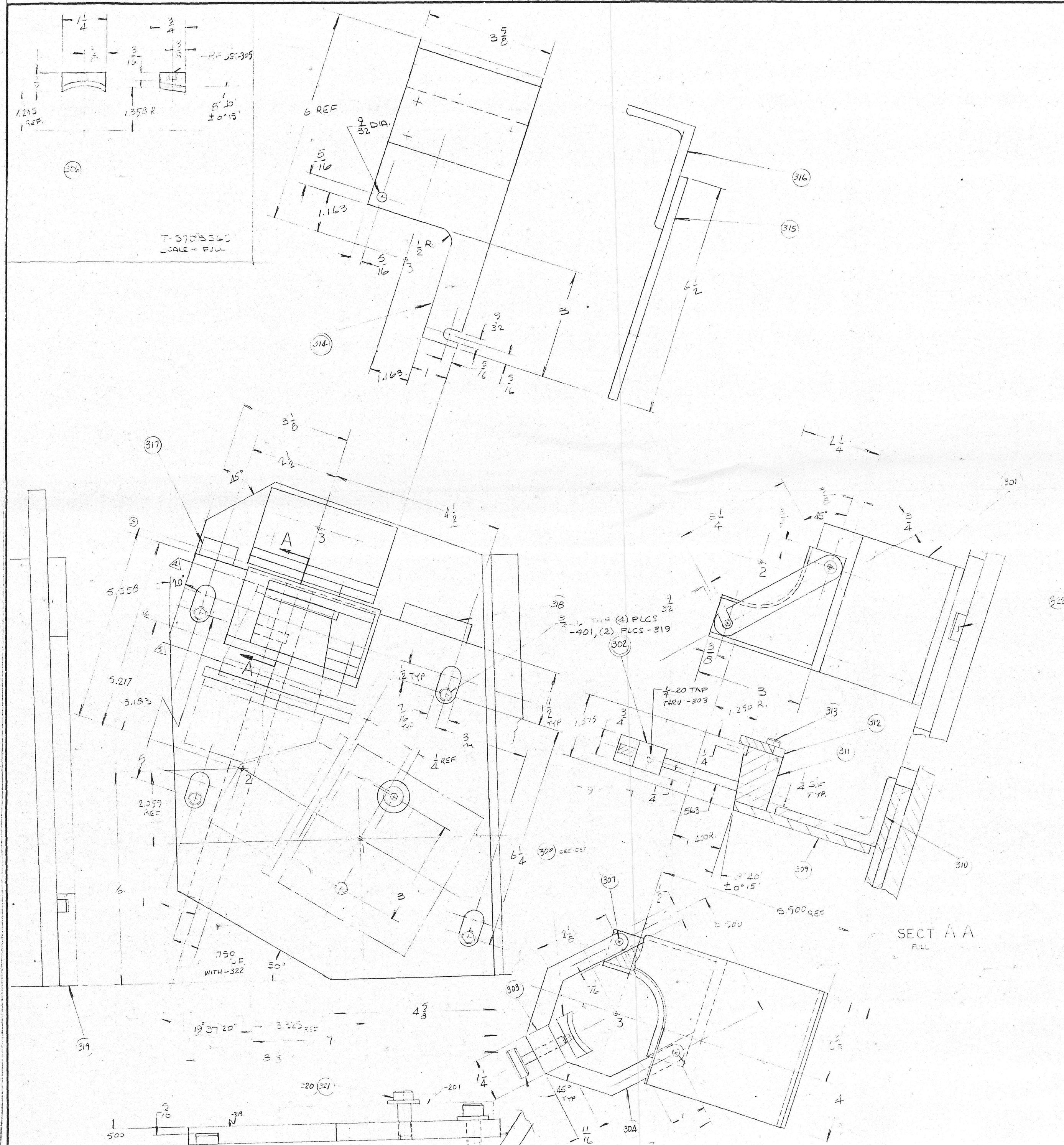
REL STAMP DATE

OFFICIAL

**12-8-84-7112
RELEASE**

MICROFILMED

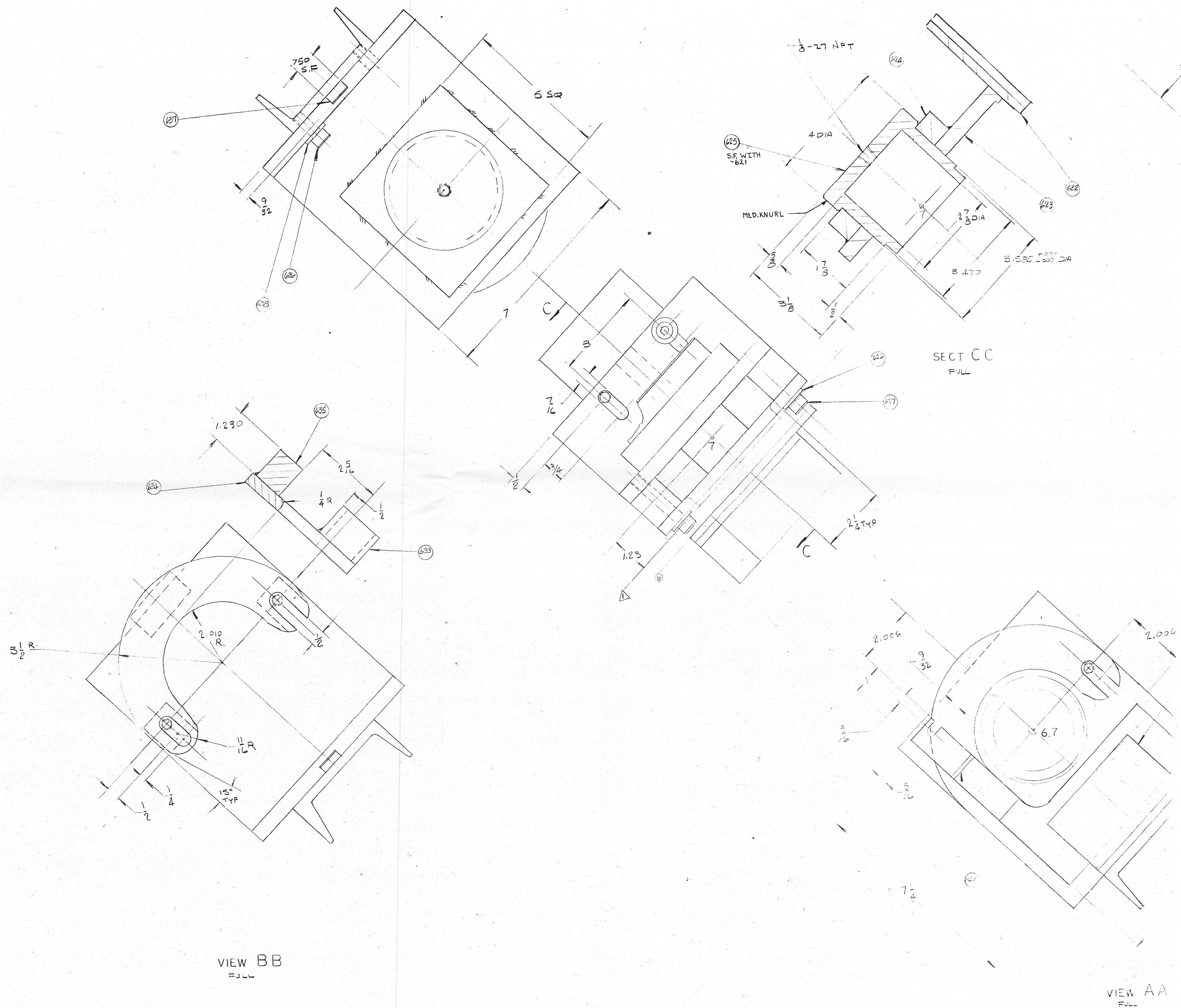




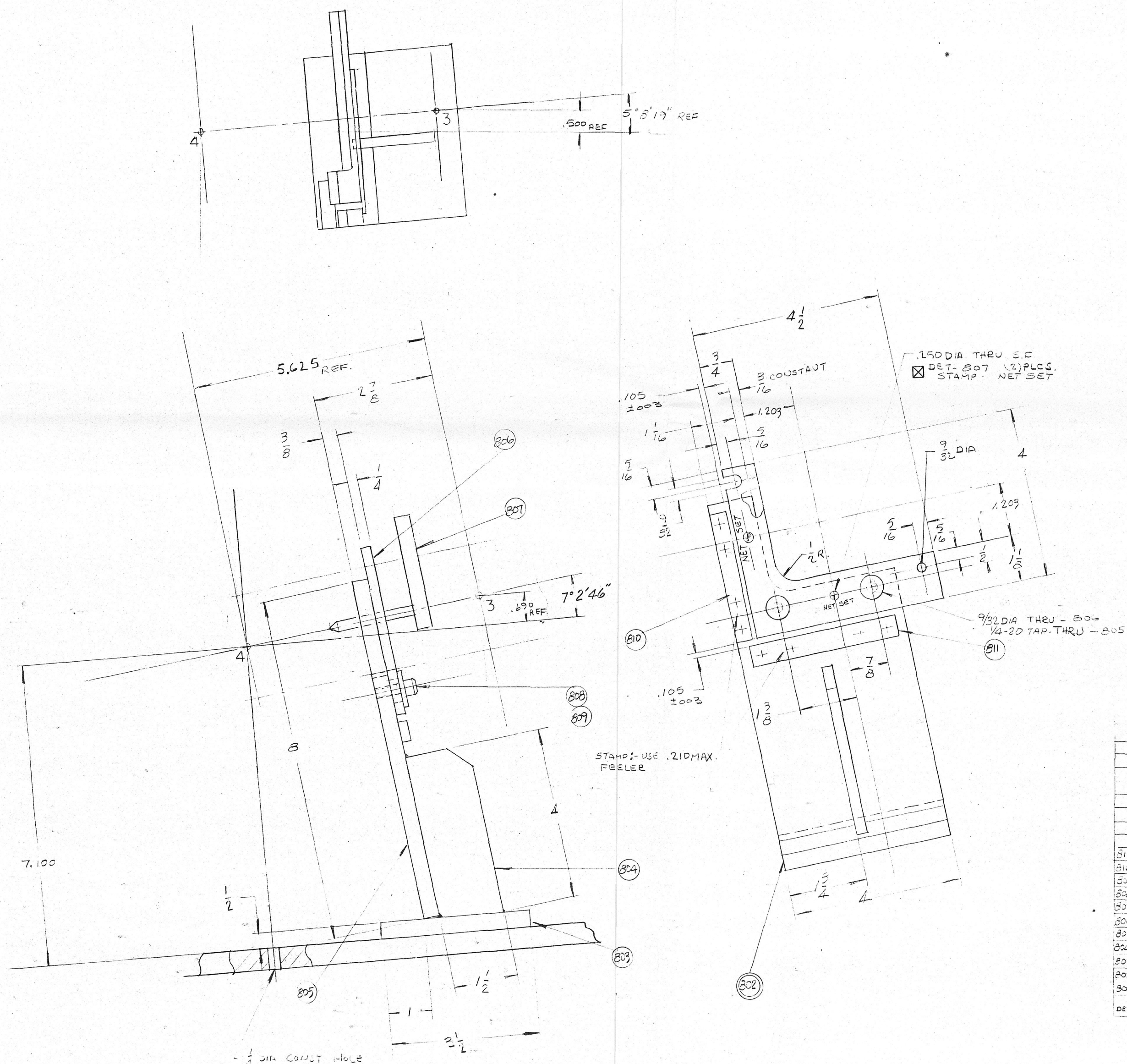
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DOCUMENT**

[illegible]

APPROVALS			OVERALL SIZE (REF.)		Rockwell International Corporation	
DEPT.	NAME (IN LONGHAND)	DATE	LENGTH	WIDTH	Rochester Division	
			HEIGHT		Canoga Park, California	
			IDENTIFY THIS TOOL		TOOL NAME	
			AS		TOUCH WELD SIG	
PROPERTY			PART NO.		PART NAME	
VOL. FRANCES, EXCEPT AS NOTED			DRAWN		DATE	
ANGLES # 1-2			CHECKED		DATE	
			APPROVED		DATE	



REVISIONS					
REV.	CHANGE	REASON	BY	CHK.	DATE
1	POEUM RELEASE	7-6704722	TWS		
2	2ND Prelim RELEASE	6704722	TWS		1-15-55
3	FINAL RELEASE	6704722	TWS	YR	4-5-55



SECT J J
FULL SIZE 1/7

(801) MAKE REMOVABLE

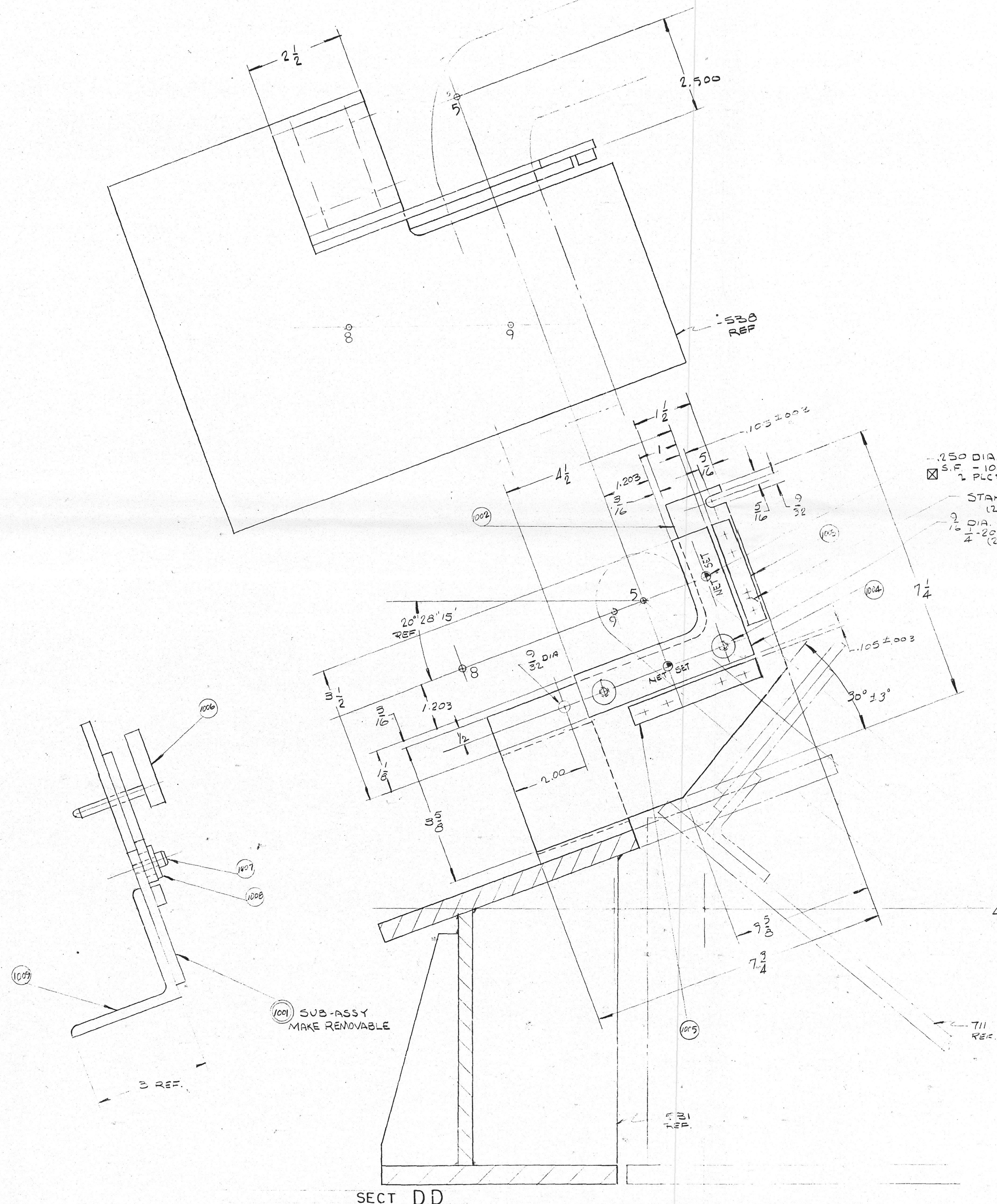
RELEASED
DOCUMENT

REV.	DESCRIPTION	SIZE	QTY	RECEIVAL
811	1 HRS	1/4 x 5/8 x 3		
810	1 HRS	1/4 x 1/2 x 3		
809	2 WASHER - HRS	1/4 x 1/2 x 3/8		
808	2 SOC HD SCR	1/4-20 x 3/4		
807	2 L PIN (AMERICAN)	808 37040 (WHA)		
806	1 FLAT GRD STL	1/4 x 1 x 4 1/2		
805	1 HRS	3/8 x 4 x 5		
804	1 HRS	1/4 x 1/2 x 4		
803	1 HRS	1/2 x 3/8 x 4		
802	1 WELD ASSY	1/4-20, 811, 805		
801	1 SUB ASSY	1/4-20, 811, 805		

APPROVALS		OVERALL SIZE (REF.)		Rockwell International Corporation Rocketdyne Division Canoga Park, California	
DEPT.	NAME (OR LONGHAND)	DATE	LENGTH	TOOL ENGINEERING	
			WIDTH	TOOL NAME TORCH WELD JIG	
			HEIGHT	PROPERTY AS	
IDENTIFY THIS TOOL			PART NAME		
AS			DATE		
TOLERANCES EXCEPT AS NOTED			DATE		
FRACTIONS ± 1/32			DATE		
DECIMALS (XXX) ± .010			DATE		
			02602		
			E-3		
			T-5705565		

T-5705565

D.C.R.		T.R.		E.O. T-6704722	
REVISIONS					
THIS TOOL DESIGNED TO ROO/ROOZ NC CHG. DATED 7-12-92					
SYN	CHANGE	REASON	BY	CHK	DATE
	PRELIM RELEASE	1004722	FOR		110-25
	FINAL RELEASE	1004722	FOR	20	45-35
					110-25

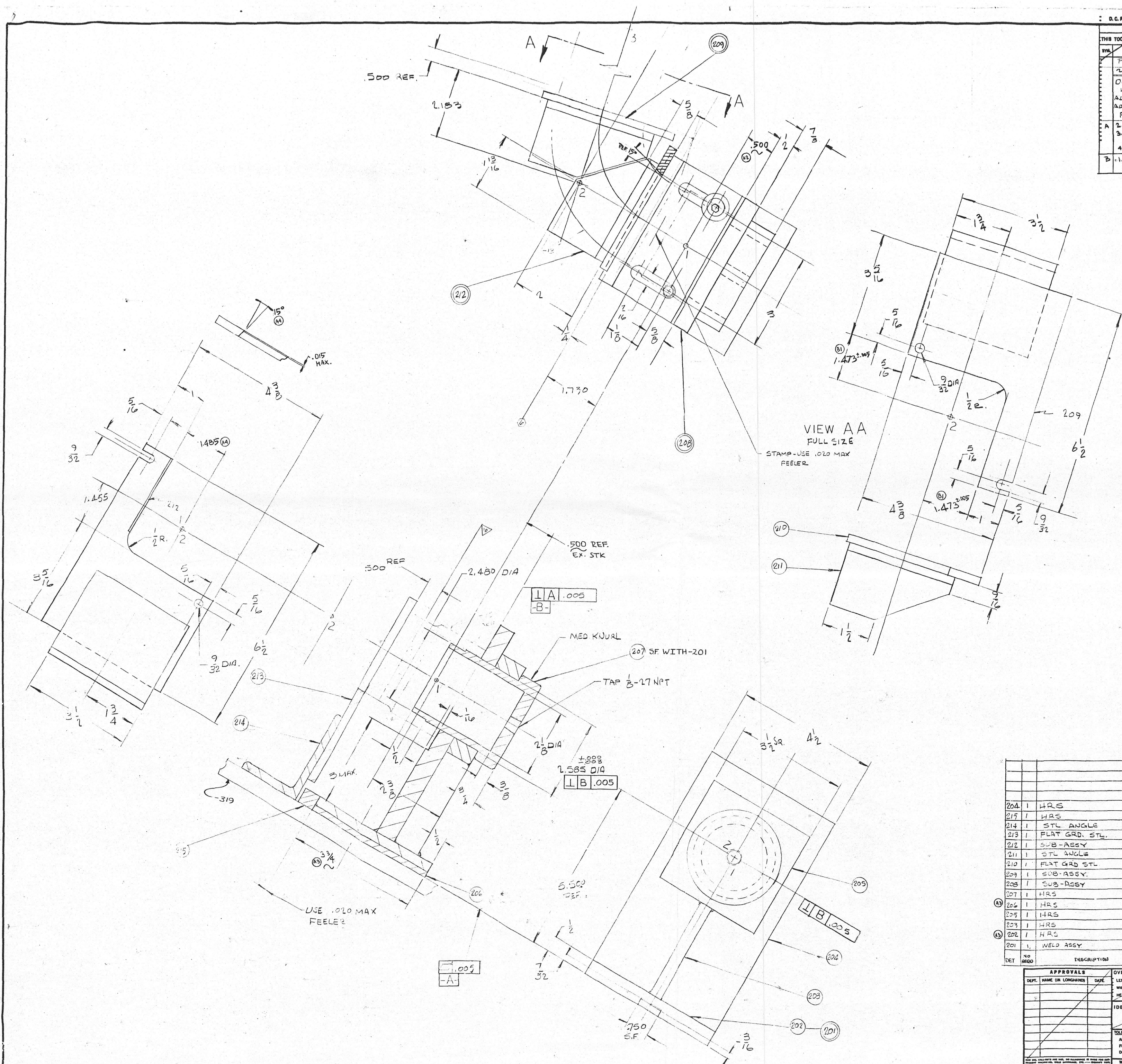


.250 DIA THRU
 S.F. - 1006 STAMP VET SET
 2 PLCS
 STAMP - USE .210 MAX FEELER
 12 PLCS
 3/16 DIA THRU DET. 1004
 1-20 THRU SET - 1002
 4 (2) PLCS

RELEASED DOCUMENT

NO	DET	REQ	DESCRIPTION	SIZE	ZONE	QUANTITY	RECEIVING
1009	1		STL ANGLE	1/2 x 3 x 3 1/2			
1008	2		WASHER	1/4 NCM 1.2 x 7/8			
1007	2		SOC HD SCR	1/4 20 x 3/4			
1006	2		C PIN (AMERICAN)	ASS-37040			
1005	1		WAS	1/2 x 1/2 x 3 1/2			
1004	1		FLAT GRD STK	1/4 x 3 1/2 x 4 1/2			
1003	1		WAS	1/4 x 1/2 x 3			
1002	1		FLAT GRD STK	1/4 x 7 1/4 x 7 3/4			
1001	1		SUB-ASSY (REMOVABLE)	1/0-1001 THRU-1009			

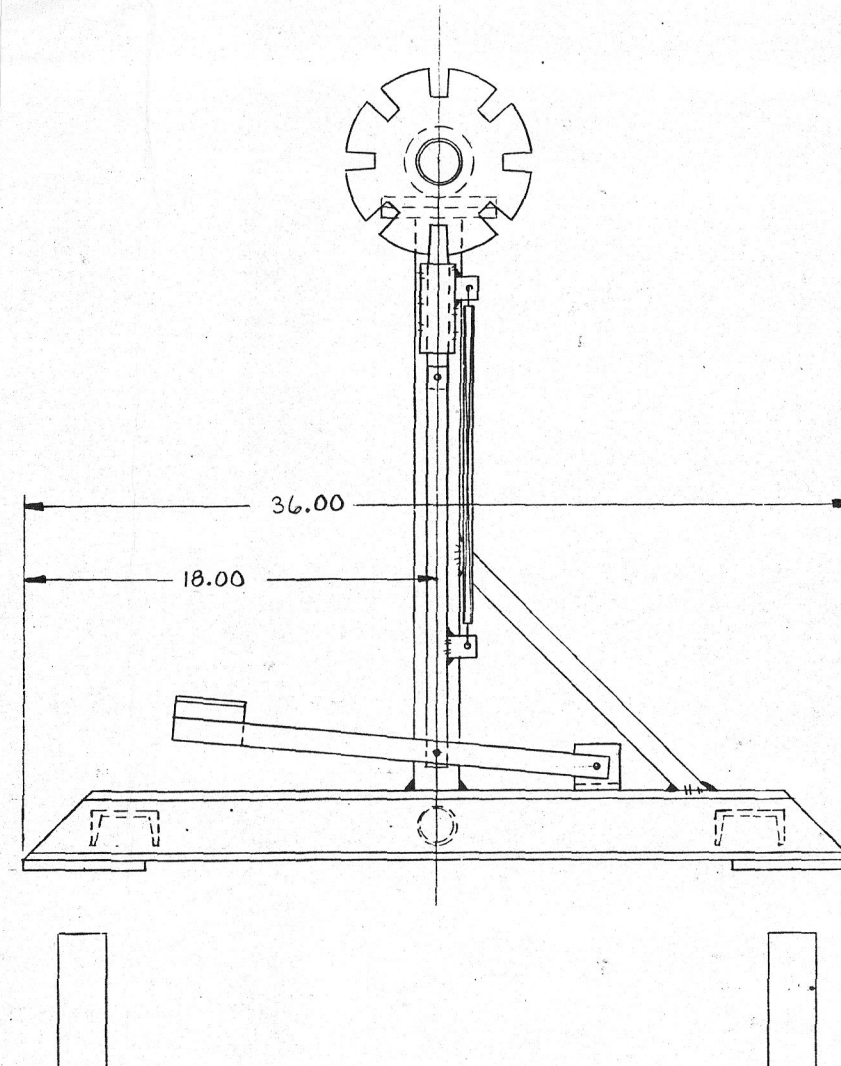
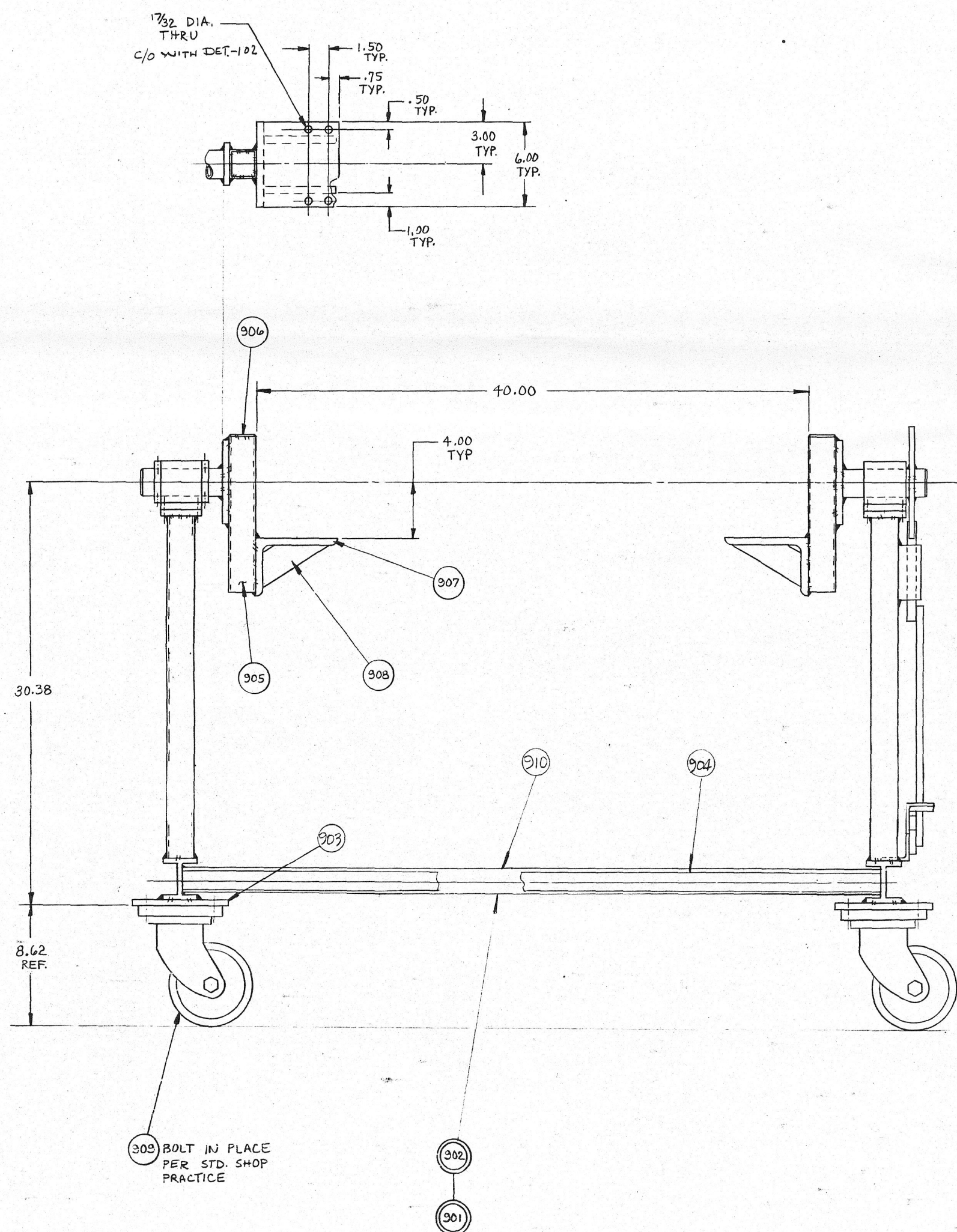
APPROVALS		OVERALL SIZE (REF)		Rockwell International Corporation Rocketdyne Division Canoga Park, California	
DEPT.	NAME (IN LONGHAND)	DATE	LENGTH	WIDTH	HEIGHT
IDENTIFY THIS TOOL			TOOL NAME		
AS			TORCH WELD JIG		
PROPERTY			PART NO.		
			E-10		
TOLERANCES EXCEPT AS NOTED			DATE		
FRACTIONS ± 1/32			11/10/80		
DECIMALS ± .010			DATE		
			11/10/80		
WEIGHT			NO. OF PCS.		
EST. ACT.			SCALE		
			T-570556		



RELEASED
DOCUMENT

[illegible]

REVISIONS						
THIS TOOL DESIGNED TO R0018002						
N/C CHG. DATED 7/12/84						
DATE	CHANGE	REASON	BY	CHK.	DATE	APPR.
	PRELIM RELEASE	706704722	765		1-18-85	
	2ND PRELIM RELEASE	6704722	765		1-18-85	
	FINAL RELEASE	6704722	765		4-5-85	



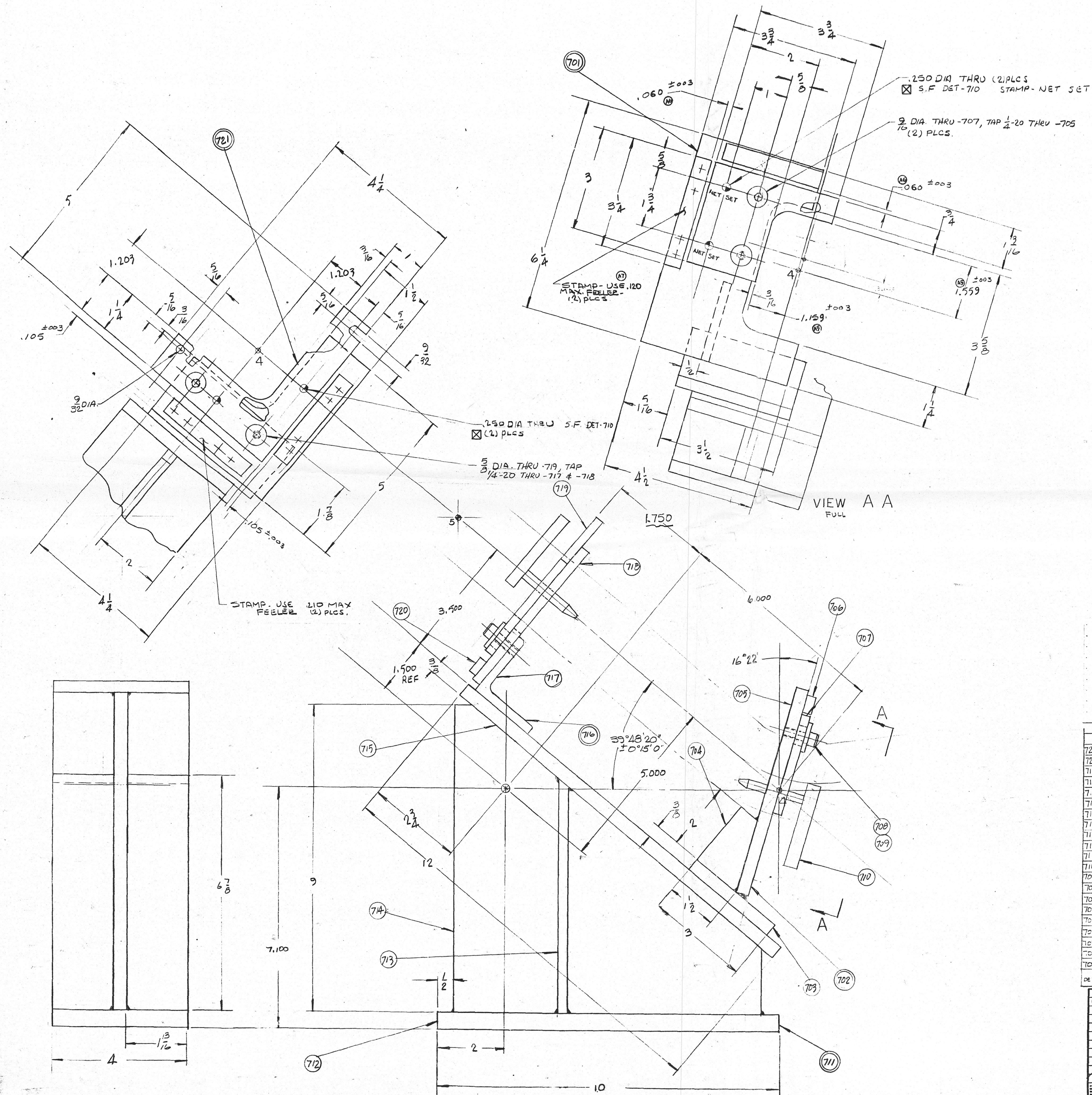
RELEASED DOCUMENT

NO	REQ	DESCRIPTION	SIZE	ZONE	SUP	STY	RECEIVAL
310	1	STL PIPE	2" NOM. X 50				
303	4	SWIVEL LOCK CASTER AEROL # 56-1-7-LG OF EQUIV.	6" DIA. WHEEL	(2)			
308	4	H.R.S.	1/2 X 2 X 6 1/2				
307	2	H.R.S. ANGLE	6 X 4 X 1/2 X 6 LG.				
306	2	H.R.S.	1/8 X 1 3/4 X 1 3/4				
305	2	SE. STEEL TUBING	2 X 2 X 3/16 WALL X 11				
304	2	STL CHANNEL	3 X 5 FT/LB X 50				
303	4	H.R.S.	1/2 X 5 1/4 X 7				
302	1	TRUNION STAND ASSY, IMPROVING LOCK TIGHT & ALTER AS SHOWN					
301	1	ASSY C/O - 302 THRU - 303					

BILL OF MATERIAL

APPROVALS		OVERALL SIZE (REF)		Rockwell International Corporation Rocketdyne Division Canoga Park, California	
DEPT.	NAME (OR LONGHAND)	DATE	LENGTH		
			WIDTH		
			HEIGHT		
IDENTIFY THIS TOOL			TOOL NAME		
AS PROPERTY			PART NAME		
VOL. CHANGES, EXCEPT AS NOTED			CHECKED DATE		
FRACTIONS			APPROVED DATE		
DECIMALS			02602		
WEIGHT			SEE SHEET JR-1		
NO. OF PCS			E-9		
SCALE			4		
			T-5705565		

T-5705565



721	1	SUB-ASSY	90-714 TRU 720							
720	2	HRS	1/4 x 1/2 3							
719	1	FLAT GRD STL	1/4 x 1/4 x 9							
718	1	HRS	1/4 x 1/2 x 5							
717	1	STL ANGLE	2 x 2 x 1/4 x 4							
716	1	WELD ASSY	C/O 715 713							
715	1	HRS	1/2 x 1/2 x 12							
714	1	HRS	3/8 x 7 x 9							
713	2	HRS	1/4 x 1/2 x 7							
712	1	HRS	5/8 x 1 x 10							
711	1	WELD ASSY	C/O 712 717 714 715							
710	4	'L' PIN (AFRICA)	ADB-370-40							
709	4	WASHER STL	3/16 x 3/16 x 3/16							
708	4	SOC HD SCR	1/4-20 x 4							
707	1	FLAT GRD STL	1/4 x 3/8 x 4							
706	2	HRS	1/2 x 1/2 x 3/4							
705	1	HRS	5/8 x 1/2 x 3/4							
704	1	HRS	1/2 x 3/4 x 2							
703	1	HRS	1/2 x 3/4 x 2							
702	1	WELD ASSY	C/O 715 715							
701	1	SUB-ASSY	C/O 715 715							
DEP	NO	DESCRIPTION	SIZE	SUPP	FOR	DATE	BY	RECEIVED	DATE	BY

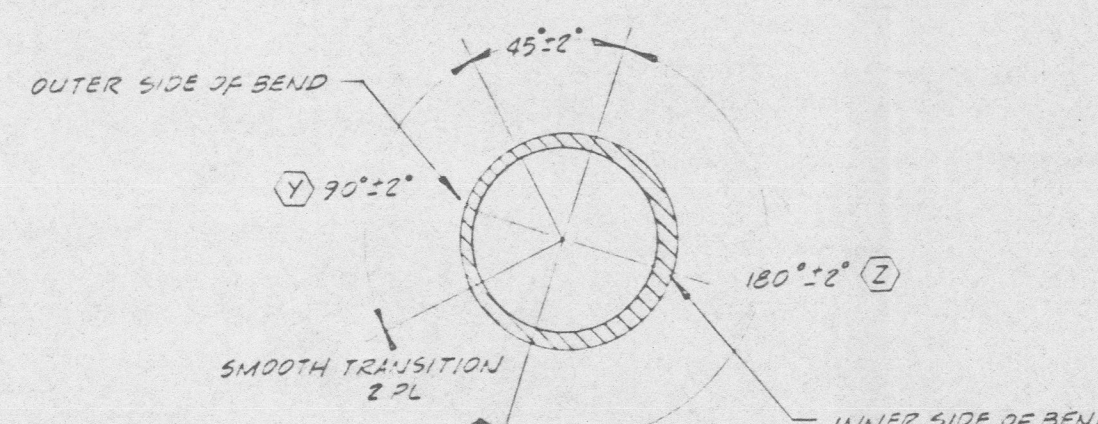
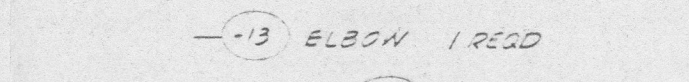
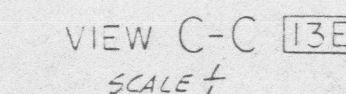
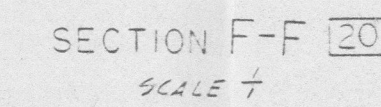
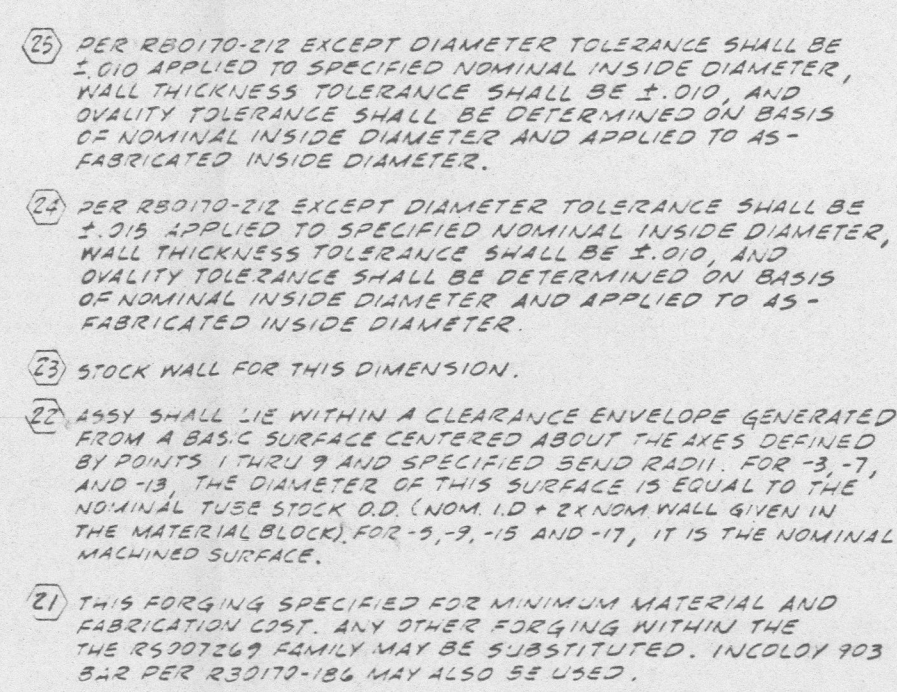
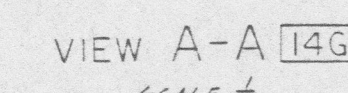
APPROVALS DEPT. NAME (OR LONGHAND) DATE			OVERALL SIZE (REF.) LENGTH WIDTH HEIGHT			Rockwell International Corporation Rockledge Division Canoga Park, California		
IDENTIFY THIS TOOL AS PROPERTY			TOOL NAME TORCH WELD JIG			TOOL ENGINEERING		
TOLERANCES, UNLESS NOTED ANGLES = 1/4" FRACTIONS = 1/8" DECIMALS (XXX) = .000			PART NO. CO2-1734 QUANTITY 1 DATE 12-27-78 RECH NO. 02602 DATE 12-27-78 ADDITIONAL SHEETS			PART NAME DVS- CHECKED [Signature] DATE 12-27-78 APPROVED [Signature] DATE 12-27-78 TOTAL SHEETS		
USE THIS INFORMATION FOR IDENTIFICATION PURPOSES ONLY. IT IS NOT TO BE USED FOR IDENTIFICATION OF THE TOOL. THE TOOL IS TO BE IDENTIFIED BY THE TOOL NUMBER AND THE TOOL NAME. THE TOOL NUMBER IS THE NUMBER OF THE TOOL IN THE TOOL ROOM. THE TOOL NAME IS THE NAME OF THE TOOL.			WEIGHT HOL. OF PCK.			SIZE, DATE & NO. E-7 SCALE		
						T-5705565		

VIEW D-D 1
158
SCALE $\frac{1}{2}$

VIEW B-B 1
12F
SCALE $\frac{1}{4}$

Technical drawing of a diamond-shaped part. Dimensions include: 2.375, 2.00, .13, $\phi 2.000$, .148, .25 R, .15, $\phi 2.610$, and .48. The drawing shows a diamond shape with a central square hole. The outer diamond has a width of $\phi 2.610$ and a height of $\phi 2.000$. The inner square hole has a side length of 2.00. The thickness of the part is .13. The outer edges are .48 thick. The inner edges are .148 thick. The corners of the inner hole are .25 R. The corners of the outer diamond are .15. The drawing is labeled with a circled 15.

23				
TUBE NO	REF PT	(Y) MIN OUTER WALL	(Z) MIN INNER WALL	(13) MAX WT LOSS
-13	2	.089	.134	2.70
-7	3	.124	.193	7.45
	4	.124	.193	
	5	.124	.193	
-3	6	.124	.193	6.00

SECTION G-G 6E

- [illegible]

[illegible]